Education is not preparation for life; education is life itself.

(Dewey, 1916, p. 239)

Facilitating the challenge back into Adventure Challenge - The effects of facilitation of adventure-based learning experiences on elementary student's social skills and intra-personal attitudes.

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Acknowledgements

In many action research projects there is often multiple references to ‘I’ as this personal pronoun reflects that practitioners learning. In fact, there should be far more references to ‘we’ as it is rare than an individual can complete such a project under their own auspices.

I want to thank the 180 or so students who participated in the adventure challenge units and showed such enthusiasm and patience as new reflection ideas and activities were implemented.

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Abstract

Adventure Based Learning (ABL) is a physical education curriculum model that involves a series of sequenced challenges in order to promote interpersonal and intrapersonal change. ABL is a compulsory part of many physical education curricula (IBO, 2010) yet there are few resources and still less research available to support teachers to effectively create such experiences in elementary physical education. This study seeks to address this gap and investigates how my facilitation of adventure based learning affects inter-personal attitudes and intra-personal skills in elementary students. It also attempts to find the most effective facilitation strategies to elevate a lesson from a fun activity to a meaningful learning experience.

A multiple-iteration, teacher-based action research methodology has been adopted to allow the practitioner-as-researcher to design an adventure-based learning program for grade 4/5 students, then conduct it, reflect on the successes and challenges encountered and make modifications for an additional round of investigation. Multiple data sources including student interviews, critical friend observations, group surveys and student and teacher reflection journals have been used to polyangulate the data.

The thematic analysis found that intra-personal attitudes were difficult to plan for or measure and by contrast inter-personal skills were easier to plan for and were able to then be used to scaffold learning into more abstract concepts. Evidence from the first iteration of the research cycle indicated that the skill that needed the most attention was that of communication, which then became the design focus for the second round of data collection. Five key themes emerged in the findings and discussion including “Intra or Inter”, “Being heard’, “The elusive art of facilitation”, “Know thyself” and “Know your students”. From these themes it became clear that rather than following a fixed protocol, the key to success appeared to centre on the role of the facilitator in adapting to changing demands of student needs and other external factors. The teacher must also know how to balance a pragmatic approach with meaningful facilitation of student’s reflection while understanding the diversity of needs within their classroom.

Chapter 1. Introduction

As an elementary Physical Education teacher, I am curious about the learning that students were taking from their Adventure Challenge unit. I have been teaching this particular unit for a number of years and have noted how it has always a favourite of students and teachers. The more I teach it, the more I have realised that it has a way of taking students to places they do not often get to go to. However, though it seems clear that students are engaged and it is stimulating to teach, there remains a sense that there is potential for so much more. Adventure-based learning (ABL) has steadily moved into mainstream Physical Education (PE) programs in New Zealand and in my context, that of the international school, over the past few decades. Amongst many other positive effects, ABL has been proven to enhance interpersonal skills and intrapersonal attitudes of its participants (Hammersley, 1992). ABL seemed the ideal medium for exposing elementary students to these important social and personal skills. Why then, did I feel as though my lessons did not seem to consistently reach these higher-level skills?

1.1 - Context and rationale

Because I am a filling the role of a participant–as-researcher it is important to describe the context in which I teach. I have been teaching elementary PE in an international school setting for a number of years. This setting has a highly multi-cultural student and faculty body (76 nationalities at my current school in Vietnam) and as it is generally independent from any national body, is able to pursue its own form of innovative teaching and learning. Class sizes range between 16-22 and students are highly motivated and are enthusiastic about PE, with each student getting 120 minutes per week of dedicated PE time. We often join classes to team-teach and have a full time teaching assistant to aid instruction.

The curriculum framework I have taught with is the Personal, Social and Physical Education (PSPE) subject framework, which is a part of the Primary Years Program (PYP). This program itself is the elementary component of the International Baccalaureate (IB), a K-12 framework that builds towards "developing inquiring, knowledgeable and caring young people who help to create a better and more peaceful world through intercultural understanding and respect" (IB, 2008, p. 3). One of the compulsory strands within the PSPE's guiding scope and sequence document is 'Adventure Challenge', which it defines as:

> *A variety of tasks requiring the use of physical and critical-thinking skills by individuals and/or groups; challenges that require groups to work together collaboratively in order to solve problems and accomplish a common goal; recognizing the role of the individual in group problem solving. (IB, 2009, p. 5)*

Prior to teaching in the international school setting, I had never had specific training on how to run an elementary adventure challenge unit from either my Physical Education Teacher Education (PETE) or thereafter during my PYP education. At my first international PYP school I was given a collection of individual and group activities to run, none of which were linked or sequenced. I really enjoyed teaching the unit as it brought a lot out of the students that you do not normally see in the traditional PE class setting and they were always enthusiastic about the unit. However, after doing this unit a few times I realised that although the students clearly enjoyed the unit, the evidence was inconclusive as to whether interpersonal skills and attitudes were actually being improved. For example; students seemed as though they were arguing much of the time and sometimes not achieving the tasks set. The discussions I had set up did not always to plan and seemed to turn in wildly different directions. I was unsure if I was bringing the desired personal reflections and responses that elevated the lessons from just another fun activity to a meaningful learning experience. When talking with peers in the international school and PYP context, I gathered that they were having the same feelings of enjoying the units but having the same desire to go deeper. The purpose of this study, therefore, is to establish how I might best facilitate an elementary adventure challenge unit to improve the development of interpersonal attitudes and interpersonal skills in my students.

1.2. Research questions

To guide any qualitative research it is important to create questions that the researcher feels need to be addressed. The two most important areas deduced from the rationale were the effects on inter and intrapersonal dispositions and skills by adventure experiences and the issues surrounding the successful facilitation of these.

1) How does adventure-based learning affect inter-personal attitudes and intra-personal skills in elementary students?

2) What are the most effective models of facilitating adventure-based learning activities to enhance elementary student's learning experiences?

1.3. Significance of study

The research that has been undertaken on the use and effects of adventure education on elementary children is under-represented and there is virtually no research done on the place of adventure challenge within the context of international teaching. This is a concern for the physical education teacher in the PYP as it is prescribed in the curriculum but given little to no guidelines as how to implement it successfully. Through this research I aimed to come away with better understanding on how to implement and facilitate these learning experiences effectively and hopefully draw some light for other teachers, internationally or potentially more broadly into national curricula, in this relatively opaque segment of elementary physical education.

1.4. Summary of methodology

To do this I adopted a Teacher-Based Action Research methodology, which has allowed me to conduct this small-scale project with the intention of improving student outcomes and improving my delivery and assessment of these outcomes. In order to ensure rigour and trustworthiness I have been sustained and systematic by adopting a polyangulation of data-collection that spanned over the course of two rounds of action research. The participants and methods selected incorporated two self-reflective diaries to collect my reflections with my co-teachers my own on-going observations, 18 in-depth student interviews about their learning experiences, over 150 student self-reflective surveys, formative and summative assessment tasks used throughout the unit and three critical peer observations.

1.5. Limitations

As with any action -research process where the researcher is a participant in the study, there will be areas of bias that need to be monitored and allowed for. Within a multiple-iteration framework, it is necessary to try and avoid having current reflections mix with past findings. I therefore need to be aware of my neutrality dilemma when conducting my data collection and analysis.

When researching with children there is a raft of potential ethical concerns that must be considered. My context has little self-regulation on these matters and no governing national body to refer to so it is down to my personal integrity and accountability to ensure the process remains legitimate and safe for all the participants. This section seems out of place here. I suggest road map of the thesis instead.

Currently, the amount of research on the field of adventure-based learning in elementary physical education is under-represented considering how many countries have it included in their national standards (NASPE, NZ, UK). Within the scope of the PYP, there is little evidence of any guide in what practices to incorporate in teaching Adventure Challenge. This means much of the instruction is open to teacher interpretation, and with such a diversity of teaching backgrounds in the international schooling world, this mean student's learning experiences may be vastly different.

My context of teaching in an international school is very specific, not only geographically but also culturally as well. Our learners and teachers are from markedly diverse backgrounds, with over 70 countries being represented across the faculty and student body. This brings into question the generalizability of my results to teachers in different contexts around the world. The PYP curriculum that this study is based under does also not marry with many national curricula. It may however, be useful for other PYP PE practitioners, who are in a similar situation.

1.6. Definition of Terms

Adventure Education

Direct, active, and engaging learning experiences that involve the whole person and have real consequences, including education activities and experiences usually involving close interaction with the natural environment and within a small group setting that contain elements of real or perceived risk. The outcome, while uncertain, focuses on the intrapersonal and interpersonal development of the individual or group (Prouty, Collinson, Panicucci, 2007).

Adventure-based learning

Adventure-based learning (ABL) is based on the values of fostering intrapersonal and interpersonal growth in participants through the use of a deliberate sequence of activities, combined with purposeful reflection (Sutherland & Stuhr, 2012, p. 13). A subset of adventure education, ABL

activities are commonly sequenced to include cooperative games, trust building activities, problem solving and decision-making activities, and low and high ropes courses. Debriefing and reflection based on these activities encourage and develop skills in communication, goal setting, leadership, and taking responsibility (Ministry of Education, 1999).

Adventure Challenge

Term used by the International Baccalaureate Organisation (IBO, 2010) to categorise one of the Physical Education strands. “A variety of tasks requiring the use of physical and critical-thinking skills by individuals and/or groups; challenges that require groups to work together collaboratively in order to solve problems and accomplish a common goal; recognizing the role of the individual in group problem solving.” (IBO, 2009, p. 5). Traditionally a set of adventure based learning activities designed to improve intra-personal attitudes and social skills.

Elementary Students

These are the students that attend my school. In this case the students are Grade 4 and will be 9/10 years old and Grade 5, who will be 10/11 years old.

Experiential Education

A philosophy and methodology in which educators purposefully engage with learners in direct experience and focused reflection in order to increase knowledge, develop skills and clarify values (Association for Experiential Education, 2012).

Facilitation

To smooth the progress of and guide a group toward achieving their goals during an adventure programme. The process of facilitation covers everything the leader does before, during and after the experience to enhance the particiapant’s reflection, integration, and continuation of lasting change that occurs through the adventure experience (Priest, Gass & Gillis, 2000).

Frontloading

In direct frontloading, the adventure facilitator directs the clients to address one or more of the five functions (revisiting, objective, motivation, function, and dysfunction) before the activity begins so the participants can make connections and learn both during and after the experience (Prouty et al., 2007).

Intra-personal attitudes

The PYP (IB, 2010) define these as appreciation, commitment, confidence, cooperation, creativity, curiosity, empathy, enthusiasm, independence, integrity, respect and tolerance.

Inter-personal skills

The PYP (IB, 2010) define these as social skills and consider them to be accepting responsibility, respecting others, cooperating, resolving conflict, group decision-making and adopting a variety of group roles.

Primary Years Program

The International Baccalaureate offer this program for students aged 3 to 12, and it focuses on the development of the whole child as an inquirer, both in the classroom and in the world outside (IBO, 2010).

Reflection

A series of sequential steps in a process that a person goes through following an experience, which includes: (a) reorganizing perceptions, (b) forming new relationships, and (c) influencing future thoughts and actions in order to learn from an experience (Sugerman, 2000).

Sequencing

Paying attention to the order of activities so that the order is appropriate to the needs of the group. (Schoel, Prouty, and Radcliffe, 1988, p. 3.5).

Chapter 2: Literature Review

Adventure education (AE) has an extensive history in a range of areas yet has only recently been incorporated into mainstream physical education classes. This chapter looks at its development from experiential education roots through its various iterations to the adventure –based learning settings we see today. The basis of experiential education stipulates that students learn more effectively through direct experience and purposeful reflection and that the educator's role is to facilitate this process. Adventure education would prefer for learning to occur in an environment out of the controlled classroom. By placing students in these alternative environments it has been found that they are able to transfer abstract concepts into meaningful and concrete experiences. Like Outdoor Education (OE), Adventure-based learning (ABL) is a branch of adventure education, except that it is more specifically focused on the delivery of AE in the curricular format for physical education programs. As this study operated in the context of an elementary PE class, this is the program that has been adopted in this study. The essential practices of ABL provide a framework for a theoretical discussion. The processing and the facilitation of that experiential process are the lynchpins in turning what might merely be an engaging activity into a meaningful experience. Models pertinent to ABL have evolved as different levels of complexity have been identified and the role of the facilitator has also developed.

Evidence suggests that adventure education is effective in achieving personal growth but only recently have studies been able to support what those benefits are in particular and how and why this happens. More recently research has been less concerned with the outcomes and has begun to focus more on the processes of AE. This chapter looks at the effects, both positive and negative, and the processes adventure programs need to consider to ensure that the outcomes are beneficial for its participants.

2.1. Theory of Adventure Education

Adventure education can be defined as direct, active, engaging learning experiences that involve the whole person and have real consequences (Prouty et al., 2007). Adventure education has borrowed largely from the conceptual framework of experiential education and Bisson (1997) uses an analogy of an umbrella, with the over-arching "experiential education" being supported by the ribs of the umbrella representing a number of differing frameworks such as outdoor education, adventure education (AE) and adventure-based learning (ABL). Siedentop and Tannehill (2000) suggest that "experiential and adventure learning provides learners with the opportunity to challenge themselves

physically and mentally, work cooperatively as a group to solve problems and overcome risk, and gain respect for, confidence in, and trust in themselves and their peers" (p. 151). Adventure education is therefore aligned with experiential education in that participants are learning by doing for themselves in situations that are designed to take them out of their comfort zone.

The foundations of the modern adventure education movement were largely laid down by the work of progressive experiential learning theorists John Dewey, Kurt Hahn, Jean Piaget, Kurt Lewin and David Kolb. The influence of these theorists and practitioners is well-documented (see Kolb, 1984; Miles and Priest, 1990; Warren et al, 1995; Cavert, 2007). In particular, the work of two of these theorists, John Dewey and David Kolb, had a major impact on the field of experiential education.

2.1.1. Experiential Education

Experiential education essentially postulates that learning happens more effectively if the learner is optimally involved in the activity. The original creator of this theory was Dewey, who conceptualized experiential education, as being primarily "interested in enabling students to connect abstract notions to concrete life experiences" (1938, p. 5). Regarding the impact Dewey has had, Greenaway (2008), states that "Dewey provides a broader vision of 'educative experience' than many of his followers do" (p. 365). Dewey claims that schools should not be different than society, and they should provide a more deliberately focused version of the learning experiences already present in the world. He proposes that the proper way to think about schooling is to place students into an environment of purposeful social activity, with the environment, as well as their activities in it, doing the educating (Dewey, 1916/1966, 1938/1997). Such engaging experiences are important for Dewey's conception of development because he theorizes that only by fully experiencing the present can students be prepared to fully experience the future:

> *We always live at the time we live and not at some other time, and only by extracting at each present time the full meaning of each present experience are we prepared for doing the same thing in the future. This is the only preparation, which in the long run, amounts to anything. (Dewey, 1916/1966, p. 30)*

In his foundational text, *Experience and Education* (1938), Dewey stipulates that the teacher's duty is to create "educative" environments that relate to and bring out the student's interests. It is then the

responsibility of the teacher to guide the student towards worthwhile or educative experiences – those experiences that have meaning to the student. He then contrasts this with "mis-educative" experience which is any experience "that has the effect of arresting or distorting the growth of future experience" (Dewey, 1938, p. 5). To do this, he suggests that teachers need to prepare an activity with the objective of learning something and the environment should be explicitly designed in the service of that goal. In this regard, Dewey wishes for teachers to capture the meaningful nature of the informal but with the intentional planning and learning goals of the formal (Wojcikiewicz & Mural, 2010). This shows that teachers need to approach education in particular ways whereby the environment we create should allow students to make meaning. We need to plan to be open to spontaneous learning opportunities, and get students fully engrossed in the activities we plan. For example, in a PE class this might take the form of students creating a structure using the equipment available and then discuss what they built and how and why they built it.

Dewey is concerned that the quality of the experience be planned and structured in a way that encouraged students to reflect on and learn through their engagement in activity. He asserts that essential to the process is the opportunity for reflection and "meaning making" that connects the student's experience to the students' world (p. 38). In other words, Dewey considers experience as a dynamic process connected with the past, present and future (Ord & Leather, 2011), stating "an experience is always what it is because of a transaction taking place between the individual and, what at the time, constitutes the environment" (Dewey, 1938/1997, p. 43). Knowledge, in Dewey's view, has a practical instrumentality in the guidance and control of this interaction (Sorrell, 2013). He believes it was the school's and teacher's role to guide the process of education through creating meaningful experiences and for the students to have the opportunity to reflect on these experiences.

A number of educators and researchers (Dewey, 1938; S. Priest & M. Gass, 2005; Prouty et al., 2007) have constructed models to explain the essential features of experiential learning including experiencing and reflecting. All of these models emphasise the cyclic nature of the learning process. Kolb (1984) melds Dewey's idea of reflection into the effective completion of the processing and developed the Experiential Learning Cycle (ELC). This model stipulates that engaging authentic learning is a process of active experimentation (Planning), concrete experience (Doing), reflective observation (Observing) and abstract conceptualisation (Reflecting). Participants move through the

cycle and process the experience with the end-result being a deeper understanding of what happened, how it happened and how it might affect decisions in the future.

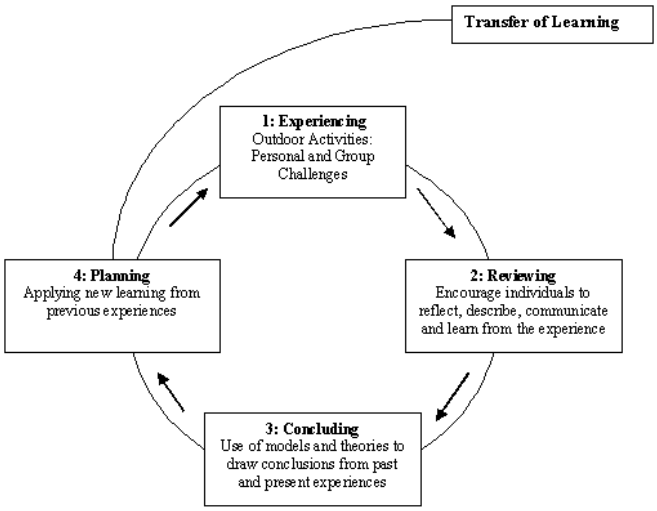

Figure 1. Kolb Experiential Learning Cycle (1984)

Kolb (1984) suggests the learning process starts with a person carrying out an action and seeing the effect of the action through reflection. In line with Dewey's transformative stance, Kolb defines learning as "where knowledge is created through the transformation of experience" (Kolb, 1984, p. 38) and is ultimately converted from this concrete action into an abstract learning through personal reflection.

Experiential education theory stipulates that active learning is often more valuable for the learner because they are directly responsible for and involved in the process. Reflection is then the capstone process "that turns experience into experiential education" (Dyson & Brown, 2005, p. 156). For example, in my teaching, I have found that without adequately reflecting on an experience students merely viewed the challenge as a task that was successfully achieved or not, rather than give thought to the process of actually happened during the process of completing that task.

However, Ord and Leather (2011) contend that the various forms of experiential learning cycles do not take into account the breadth and depth of the different experiences people have and referring to the "experience in simplistic terms is likely to reduce the potential for understanding the meaning of

that experience" (p. 14). Criticism also centres on the way complex cultural, social, and physical processes during experience and learning are reduced to a "rational, excessively cognitive, individual phenomenon" (Seaman, 2008, p. 3). Brown (2004, 2009) argues that the same models compartmentalize the experience and cannot take into account the context in which it was situated therefore making reflection after the act both contrived and ineffective. Ord (2011) agrees that this does draw away from Dewey's original idea of experience and states that;

> *It might be useful to think of experiential learning three dimensionally, as a continuing spiral of action and reflection, where the activities are specifically designed to build upon each other and so extend an individual's range of experience and cognition over time (p. 15).*

Though the type of process that takes place during experiential learning varies, there is general consensus that experience and reflection are connected and this forms a foundation for adventure education.

2.1.2. Adventure education and Adventure-based learning

Sitting under Bisson's (1997) experiential education umbrella, adventure education is based on the experiential learning model that combines direct experience with guided reflection and analysis under the supervision of a group instructor/ facilitator/ teacher. Dyson and Sutherland (2005) go deeper and describe AE as,

> *involving activities that encourage holistic student involvement (physical, cognitive, social, and emotional) in a task that involves challenges and an uncertainty of the final outcome. Activities are carefully sequenced to ensure student safety while allowing them to take ownership of their learning (p. 230).*

Hattie, Marsh, Neill, and Richards (1997) suggest that AE broadly encompasses adventure programming, exploration schemes, survival and wilderness courses, and outdoor environmental education among others. Though this has more recently been consolidated (Priest & Gass, 2005), for the purposes of this study it was necessary to narrow the scope down to the adventure experiences that occur within a physical education setting. This field is considered the curricular vehicle of AE and is called Adventure-Based Learning (ABL).

ABL is the deliberate use of sequenced adventure experiences for the personal and social development of participants (Cosgriff, 2000). It is made up of components that can take place either in a gymnasium, on a challenge course or in the wilderness (Cavert, 2007). As depicted by Luckner and Nadler (1997) in a linked sequence, these components include;

1. The Student – participating with some expectation of a meaningful learning experience. Some anticipation causes a sense of an internal situation referred to as...
2. Disequilibrium – an individual's awareness that a mismatch exists between old ways of thinking and new information, an important link to learning. This disequilibrium takes place in a...
3. Novel Setting – an environment out of the ordinary for the individual that enhances the opportunity to break down individual and group barriers contributing to heightened levels of arousal leading to underlying conditions of effort, trust, constructive levels of anxiety and risk integrated within a...
4. Cooperative Environment – an atmosphere of education that emphasizes cooperative versus competitive learning that fosters the development of group cohesiveness, and allows time for interpersonal and intrapersonal communication while engaged in...
5. Unique Problem-Solving Situations – an involvement with new skills and problem solving opportunities introduced to participants in a sequence of increasing difficulty solved when group members draw on their mental, emotional and physical resources. Completion of these tasks leads to...
6. Feelings of Accomplishment – which lead to increased self-esteem, an increase of locus of control, improved communication skills and more effective problem-solving skills. The meaningfulness of these accomplishments is augmented by...

7. Processing the Experiences – which is a time set aside for feedback and reflection on activities and interactions of the group allowing participants to express thoughts and feelings that they are experiencing. This process is essential if there is going to be...
8. Generalization and Transfer – the ultimate goal of the adventure-based [and adventure] experience. Participants are encouraged to discover ongoing linkages, bridges, and connections to what they are learning so that they can integrate their personal and group insights and desired behaviours into their lifestyle during the remainder of their program and when they return home. (Luckner and Nadler, 1997, p. 21)

Table 1. Components of Adventure Based Learning

The term ABL emphasizes the value of the 'process' of students participating in a physical activity, such as a cooperative activity, an initiative problem, or a challenge task, and de-emphasises the outcome of the activity, while emphasising student's social development (Cosgriff, 2000). The organisation that initially proposed the integration of ABL within a PE program was an organisation named Project Adventure (PA). Karl Rohnke (1984) suggested that PA's learning goals promote a holistic educative process, and as a result, most of the elements of ABL are attributable to the philosophies of this program (Prouty, Panicucci & Collinson, 2007). Sutherland and Stuhr (2012) argue that ABL is a curriculum model that can be applied to different content areas, to different age groups, and in different schools and educational settings. Its impact has in turn affected other innovative pedagogical practices, such as Cooperative Learning, as it has the capability to enhance students' social skills in physical education (Dyson & Dryden, 2014).

Dyson and Sutherland (2014) present the essential practices of ABL, that distinguishes ABL from other PE curriculum models as:

- The Full-Value Contract
- Challenge by choice
- The sequence and flow of activities
- The experiential learning cycle
- The teacher in the role of facilitator

The Full-Value Contract is designed to create a safe learning climate in a class or group, where participants create and resolve upon a set of agreements that will be adhered to ensure the emotional, social and physical well-being of all involved. Challenge by choice permits the participant to decide how far they want to push themselves and is dependent on the respectful environment that is created in the FVC (Panicucci, Hunt, Constable, Kohut, & Rheingold, 2002). While these first two practices are important, the merits and limitations of the latter three of these practices will now be discussed in deeper detail as they have a far larger body of research to support them.

2.1.3. Sequencing and flow of activities

The literature shows that the sequencing of experiences is one of the most important aspects of ABL instruction and that challenges should be logically sequenced to meet the educational goals of the group (Bisson, 1997; Kopf, 1996; Stremba & Bisson, 2009). Without a carefully planned sequence inter-/intrapersonal development and group cohesion can be negatively impacted (Sutherland, Stuhr & Ayvazo, 2014). Though specialists and practitioners tend to agree that adventure activities should be sequenced, several authors (Bisson, 1997; Rohkne and Butler, 1995; Schoel et al., 1998) contend that there is no magical formula and that the needs and requirements of the group should lead to the customization of the set of activities. Various sequencing models, however, demonstrate that there are some commonalities across many adventure programs regarding the order of learning experiences (Bisson, 1999).

The Project Adventure Sequence (Rohkne & Butler, 1995; Schoel et al, 1998) is the model that has been used for the past 20 years or so of adventure education. It is the also the sequence that has been used in Panicucci et al. (2002) elementary ABL curriculum devised for the National American Physical Education and Health standards. It adheres to the following sequence: (a) icebreaker and acquaintance activities, (b) deinhibitizer activities, (c) trust and empathy activities, (d) communication, (e) decision making and problem solving, (f) social responsibility, and (g) personal responsibility. The PA sequence is designed to build groups from the ground up by providing opportunities for members to co-construct relationships and skills along their adventure journey together. ABL aims to develop experiences that are progressive in terms of the level of challenge and risk, and the socio-emotional skills needed to complete each activity are presented to students in stages based upon the participants' ability to complete the goal of the activity (Stuhr & Sutherland, 2013)

2.1.4 Processing the Experience

As described earlier in Kolb's (1984) experiential learning cycle, there are four stages AE participants need to go through when they are completing a challenge; planning, doing, observing and processing (or what is more commonly referred to in AE as reflection). While every component of an adventure experience is important, there are many authors who would argue that the processing element is the most essential (Luckner & Nadler, 1997; Miller, 2011; Priest, Gass, & Gillis, 2000; Ressler, 2012). Luckner and Nadler (1997) describe processing as a purposeful activity that is structured to encourage individuals to plan, reflect, describe, analyse, and communicate about their experiences and consider it as the vehicle with which to accomplish transfer of learning to everyday life. Processing aids individuals and groups trying to interpret experiences into structured words and concepts. It provides an opportunity to give the experience personal meaning, which may in turn lead to changes in attitude and behaviour of individuals (Nadler & Luckner, 1992).

Processing can occur at any stage of the learning cycle, depending on the individual or group's experience and the intentions of the facilitator. If the facilitator intends for it to occur at the start of the challenge it is considered 'frontloading' or 'isomorphically framing' the experience and allows participants to prepare and focus on specific areas that the facilitator feels they should work on. This can be facilitated through the use of metaphors or stories that participants might be able to relate to their external worlds (Priest & Gass, 2005). This approach has its critics such as Greenaway (2004) who argues "If interpretation precedes experience, the 'experience' is little more than an illustration in the facilitator's story. This is 'confirming through experience' rather than 'learning from experience'"(p. 4).

If processing occurs during the experience, Schön (1983) considers it be 'reflection-in-action'. This is where a facilitator will mark surfacing events through questions, confrontations, interpretations, sharing emotions, or a variety of other interventions in an attempt to avoid looking backwards and trying to keep in the present. This reflection-in-action approach is focused on participants' recognition of the meaning of these events and of the way they affect the possibilities for action in the immediate or distant future. Hovelynck (2000) asserts that this can even more pronounced during adventure education as the experiences can be more visceral and that moments of "surprise and stuckness" (p. 2) need to be reflected on or interpreted immediately, rather than waiting until the experience has concluded.

When processing takes place after an experience it is regarded as a part of a review or debrief and is considered to be a refining component of ABL (Sutherland & Stuhr, 2014). Gilsdorf (1998) suggests that the debriefing process is where the group reflects on what happened (What?) during the activity, what it meant to the group members (So What?), and what each group member can take from the experience that will impact their lives beyond participation in the challenge (Now What?). The goal of debriefing activities is for students to focus on any relevant issues arising from the experience, increase self-awareness, verbally reflect on and analyse the experience, and promote the integration of what is learned into students' lives in other situations (Gass, 1993). Ideally, the debrief process should be student-centred and guided, rather than driven, by the facilitator (Sutherland, Ressler, & Stuhr, 2011). Brown (2004) cautions that care must be taken that the students genuinely reach their own conclusions and are not engineered simply through teacher-directed questioning. Estes also warns that the balance of power is generally in favour of the teacher and there is the potential that by 'over-controlling student's reflection on experience, they devalue both the experience and the students' role in their own learning' (2004, p. 151). This creates an apparent tension between Dewey's notion that teacher must exert some direction to avoid create a "mis-educative experience" (1938, p. 5) and the idea that students must drive the making of their own meaning.

Many other models of debriefing have been put forward that extend or diverge from Kolb's ELC model. Greenaway (1993) further refined the ELC to make it easier for facilitators to remember and apply. His four-stage active reviewing sequence starts with Experience, where learners reflect and discuss the activities that occurred. The next stage is Express, where the learners consider the emotions that they felt during the process. Examine comes next in this model, where learners are encouraged to mentally detach from the experience to consider, more holistically, what happened and how well everything went. Finally, the Explore phase has learners thinking about the future and how the activity can connect back into the real world.

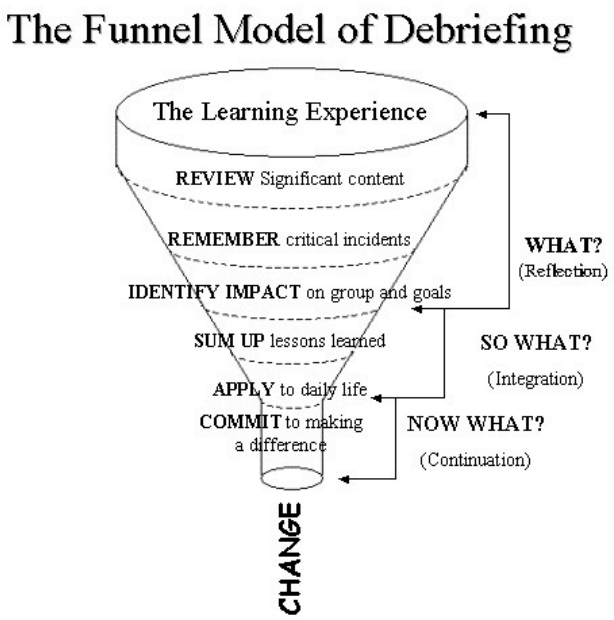

Figure 2. Funnel of Debriefing (Priest and Gass, 2005)

Priest and Gass (2005) propose a debriefing funnel based on the Gestalt therapy questions: What?, So What, Now what? (Gilsdorf, 1998). In this model, participants pass through a series of filters or sequenced questions that distil the essence of learning changes through reflections that arose from their experience. Responding to claims that these models were more focused on adventure therapy than ABL (Stuhr & Sutherland, 2013) developed a conceptualised model based on the metaphor of a Sunday Afternoon Drive. In this model the facilitator begins the *drive* with ideas for the final destination, but without a set route of how to arrive there. A roadmap (i.e., lesson plan) exists for the start of the drive (i.e., concepts to debrief), but the facilitator follows the various rhythms, feelings, power, and aesthetics of the road (such as groupings, motivations, struggles) as they negotiate the journey.

When the processing of experience occurs sometime after the conclusion of a challenge then it becomes a later version of debriefing or according to Schön (1983), 'reflection-on-action'. It is essentially is a form of personal reflection that can take place without a facilitator taking an active role and usually offers participants more time to respond. It can be self-facilitated and uses a thoroughly planned debrief where participants can express themselves in a number of ways, one of which is a reflective journal. According to Hubbs and Brand (2005) reflective journals have been

proven to be effective in facilitating students to 'connect their internal processes with their external realities' (Hubbs & Brand, 2005). When using journals, students have time to recall and reflect on their experiences and the journals can be structured so that they offer guidance. Gregg (2009a) discusses the benefits of journaling with particular references to outdoor education, commenting that they are useful for displaying student's understanding of group dynamics and an awareness of personal growth. Reflective journals are therefore an effective tool in personalising a student's experience and offer a medium to reflect without the pressure of conversation.

However, O'Connell and Dyment (2011) caution that practitioners need to be aware of the complex ethical and pragmatic issues that surround the use of journals, including issues such as confidentiality, assessment, over-use of journals, and training. For example, there is a trust relationship required between the author of a journal, who is opening themselves up to judgement by sharing their thoughts, and a teacher, who will be looking into these intimate thoughts. Pragmatically, and particularly in this study, there needs to be sufficient time allocated for students to complete their entries for them to have any quality of reflection.

2.1.5 Teacher in the role of the facilitator

> *I believe that the teacher's business is simply to determine on the basis of larger experience and riper wisdom, how the discipline of life shall come to the child. (Dewey 1938, p. 16)*

As Dewey intimates, an integral element to Adventure Based Learning is the part the teacher must play as a facilitator who can guide participants through the 'meaning making' of their experience. The word facilitation derives from "facile" which is French for "easy". Therefore, to facilitate means to make something easier. Hammerman (1999) summarises that an effective facilitator 'recognizes the value of allowing learners to experience the joy and thrill of learning by themselves' (p. 204). The role of facilitation has changed over time from "letting the mountains speak for themselves" (Gass & Stevens, 2007, p. 59) and letting student process it in their own terms to having a facilitator guide them through the whole process.

The primary responsibilities of a facilitator include setting suitable experiences, posing problems, setting boundaries, supporting learners, insuring physical and emotional safety, and facilitating the

learning process (Ressler, 2012). Panicucci et al. (2002) propose that they must have a clear direction of where an experience should be heading and what goals the participants should hope to achieve This is not to say that there will not be deviations from the path, but ultimately there should be some 'roadmap' as to where the destination of the journey is (Stuhr & Sutherland, 2013). They must then create a safe environment, or a 'climate for learning' (Roger Greenaway, 2004) where participants feel they can share pieces of themselves or push themselves out of their comfort zone without risking their emotional or physical well-being (VanderWey, Wallace, & Hansen, 2014). Hovelynck (2000) suggests that once the experience has begun the facilitator must look for moments to help participants reflect-in-action and, once completed, guide the debrief to reflect-on-action To navigate all of these responsibilities successfully the facilitator needs to adopt a number of roles depending on the situation or students involved and to know when to shift to a different one if required.

Much of the literature is focused on external facilitators coming into organisations to effect change or impart processes. In such situations, Bens (2012) claims that a facilitator is more of a referee rather than player in a game. She contends that it is their role to watch the action more than participate and through their neutrality, provide the rules to guide the interaction. Hunter (1997) also implies teachers, coaches and trainers can be facilitative but due to content and neutrality constraints, will struggle to be completely unbiased facilitators.

Schwartz (2002) outlines five facilitator roles and maintains the complete facilitator is able to move between roles depending on the needs of the client. These roles are contingent upon the objectives and parameters of the challenge. Thomas (2010) describes these roles in terms of an outdoor adventure setting;

- the facilitator – a substantively neutral role with the goal of increasing group's effectiveness by helping improve its processes. This is difficult for outdoor educators to assume because they typically have some responsibility for the content of a program and the decisions within, particularly regarding participant safety.

- facilitative trainer – goal is to help their students develop, test and get feedback on new knowledge and skills. This role is often filled by adventure educators who have responsibility to teach knowledge and skills as per the program objectives.

- facilitative leader – has strong beliefs and values about the content they are covering therefore creating a potential role conflict, which can, in turn, jeopardise the student's trust.

- facilitative consultant – often an external educator who comes in with specialised knowledge and must quickly form effective relationships with participants, such as a high ropes instructor in an outdoor setting.

- facilitative coach - usually works with participants to help them improve their effectiveness by enabling them to reflect on their behaviour and thinking (Schwarz, 2005).

An additional role that adventure facilitators, intentionally or unintentionally, adopt is that of the facilitative therapist. Gath (2009) found that because of the stress on participants, their reactions may place facilitators in positions that they are potentially untrained for. She argues that if adventure educators should be prepared with strategies to cope with such situations. However, if the participant is at-risk, that is having 'delinquency issues or emotional/ behavioural disorders' (Weston & Tinsley, 1999, p. 31), the practitioner is ethically required to refer them to someone who is trained to deal with their issues. The difficulty is that usually children do not enter the ABL setting prepared to "put issues on the table" for discussion in the way that facilitators dealing with adults will expect so these issues may go unnoticed from their own parents or teachers until is too late (Hutchby, 2005, p. 5). For example, a student might not be aware that they might be demonstrating signs of anxiety or may be unable to explain what that feeling might entail.

Kolb, Kolb, Passarelli, and Sharma (2014) devised the Educator Role Profile (ERP), which stipulates that educators must adapt their role to help learners move around the experiential learning cycle — moving from Facilitator, to Subject Matter Expert, to Standard Setter/Evaluator, to Coach. Using the ERP they found that to some extent educators do tend to teach the way they learn, finding that those with concrete learning styles are more learner-centred, preferring the facilitator role; while those with abstract learning styles are more subject centred preferring the expert and evaluator roles. Each role has particular strengths and weaknesses. The difficulty is knowing what role to play at what time. Thomas (2008a) maintains that as long as the facilitator is intentionally transparent with themselves and their participants about what role they will take, then the trust required in the learning relationship can be maintained. He claims that being aware of intuition and intention should be

considered a prerequisite to maximizing the emerging facilitators' free attention so they can take advantage of teachable moments.

Crucial in the role of the teacher as facilitator in the ABL process is that the facilitation is student-centred. In this approach the students share what they learned from their participation in the activities and the teacher need only use guiding questions when students are struggling to articulate their responses. Through this process, the teacher and student work together with the teacher being aware of the effect of their actions on the students' response and learning. They then provide opportunities for students to facilitate their own learning, and encourage them to talk to each other rather than just to the teacher (Estes, 2004). The effect of this approach is that the student's narratives remain their own, rather than an alternative interpretation of their stories.

2.2. Effects of Adventure-Based Learning

Adventure Based Learning in Physical Education is primarily concerned with the role of adventure activities/ programs in achieving educational outcomes relating to intra and inter-personal domains (Brown, 2006). Interpersonal relationships are related to how individuals function in a group situation, and include elements such as communication, cooperation, trust, problem-solving, leadership and conflict resolution. Intrapersonal relationships are related to how the individual functions within him or herself, and includes constructs such as self-concept, self-efficacy and spirituality (Priest, 1990). Much research has been invested in discovering how to attain these outcomes as outlined below.

2.2.1. Inter-personal skills and Intra-personal attitudes in the PYP

Teaching Intra-personal attitudes and inter-personal skills is a requisite in the Primary Years Programme (PYP). They are considered Approaches to Learning and are essential elements of all three programmes that follow the IB (International Baccalaureate) curriculum. Supporting Dewey's work on inquiry, the IB (2007) asserts that the construction of meaning and, therefore, understanding is complemented by the students acquiring and applying a range of skills and these skills are best developed in the context of meaningful situations. The PYP's position is that, in order to conduct purposeful inquiry and in order to be well prepared for further education and for life beyond school, students need to master a whole range of skills beyond those normally referred to as basic, such as reading, writing and mathematics. These include skills that transcend these individual disciplines. The

PYP title them 'transdisciplinary skills' and one of those broader skills would be referred to as Social skills. These have a direct transference to many of the elements of ABL.

Social Skill	
Cooperating	Working cooperatively in a group; being courteous to others; sharing materials; taking turns.
Adopting a variety of group roles	Understanding what behaviour is appropriate in a given situation and acting accordingly; being a leader in some circumstances, a follower in others
Resolving conflict	Listening carefully to others; compromising; reacting reasonably to the situation; accepting responsibility appropriately; being fair.
Respecting others.	Listening to others; discussing ideas; asking questions; working towards and obtaining consensus
Group decision making	Listening sensitively to others; making decisions based on fairness and equality; recognizing that others' beliefs, viewpoints, religions and ideas may differ from one's own; stating one's opinion without hurting others
Accepting responsibility	Taking on and completing tasks in an appropriate manner; being willing to assume a share of the responsibility. (IB, 2007, p. 31)

Table 2. Social skills within the IB.

As well as these inter-personal skills, the IB promotes a holistic view of its students. To that end they create a set of dispositions they want students to attain, as stated:

> *While recognizing the importance of knowledge, concepts and skills, these alone do not make an internationally minded person. It is vital that there is also focus on the development of personal attitudes towards people, towards the environment and towards learning, attitudes that contribute to the well-being of the individual and of the group. By deciding that attitudes need to be an essential element of the*

programme, the PYP is making a commitment to a values-laden curriculum (IO, 2007, p. 24.)

The attitudes are designed to be able to be modelled by teachers to their students. They should also be addressed explicitly "within the taught and assessed components of the curriculum so that learning experiences and assessment strategies are designed to support and promote the attitudes" (IB, 2007, p. 24).

In PYP schools, students should demonstrate:	
Appreciation.	Appreciating the wonder and beauty of the world and its people.
Commitment	Being committed to their own learning, persevering and showing self-discipline and responsibility
Tolerance	Being sensitive about differences and diversity in the world and being responsive to the needs of others.
Respect	Respecting themselves, others and the world around them.
Integrity	Being honest and demonstrating a considered sense of fairness.
Independence	Thinking and acting independently, making their own judgments based on reasoned argument, and being able to defend their judgments.
Enthusiasm	Enjoying learning and willingly putting the effort into the process.
Empathy	Imagining themselves in another's situation in order to understand his or her reasoning and emotions, so as to be open-minded and reflective about the perspectives of others.
Curiosity	Being curious about the nature of learning, about the world, its people and cultures.
Creativity	Being creative and imaginative in their thinking and in their approach to problems and dilemmas

Cooperation	Cooperating, collaborating, and leading or following as the situation demands.
Confidence	Feeling confident in their ability as learners, having the courage to take risks, applying what they have learned and making appropriate decisions and choices.

Table 3. Attitudes within the IB

One of the strands within the Physical Education scope and sequence (IB, 2009) under the PYP curriculum is titled Adventure Challenge and is well-placed to provide opportunities for a number of the attitudes and skills to be promoted under an ABL framework.

There have been criticisms of the continuum of IB programs, with some authors accusing it of elitism, due to the high proportion of private fee-paying schools who subscribe to the programs, and having a detachment between its constituent programs, including the transition from PYP to MYP (Hanover, 2010). Li goes on to suggest that "smooth transition across the programmes in partial and full continuum IB schools face many difficulties and challenges" (2012, p. 27). This same report however, found that "IB programs are characterized by high levels of academic achievement and are more frequently admitted into postsecondary institutions than peer students" (p. 21). These results were partially attributed to the Approaches to Learning, preparing students for the rigors of tertiary education.

While it is clear that the PYP requires the inter-personal social skills and intra-personal attitudes and dispositions to be taught, it is unspecific about how the best way might be to accomplish this in an elementary PE lesson. ABL appears to be the perfect medium for achieving these requirements.

2.2.2. Whether to research adventure outcomes or process?

> *The research literature…has been uni-dimensional; it has focused on outcome issues (self-concept, locus of control, etc.) and has held a blind eye to their relationship to programmatic types of issues (…activity mix, instructional staff). In essence, we have discovered an educational black box; we know something works but we don't know why or how. (Ewert, 1983, p. 27)*

The positive effects of adventure education on student's intra-personal attitudes and inter-personal skills have been relatively well-documented (Gass & Priest, 2006; Moote & Wodarski, 1997; Sibthorp, Furman, Paisley, Gookin, & Schumann, 2011; Suomi, Collier, & Brown, 2003). In a foundational meta-analysis, Hattie et al. (1997) found that researchers of adventure-based programs identified over 40 different positive outcomes that were then categorized into leadership, self-concept and self-control, academics, intrapersonal, interpersonal and adventuresome. Ultimately, their results suggest that 65% of participants were better off for having participated in OE programs.

> *In our meta-analysis, across all interpersonal dimensions, there are marked increases as a consequence of the adventure programs. It certainly appears that adventure programs affect the social skills of participants in desirable ways.(Hattie et al., 1997, p. 69)*

Neill (2003) then performed a further extensive meta-analysis of all the outcome-related studies of OE programs and concluded that there was a reasonable consensus that there is a small to moderate impact for typically measured outcomes such as self- esteem, behaviour problems, and teamwork. A particularly impressive strength was that "OE programs seem capable of triggering an ongoing cycle of positive change within participants" (p. 320). From a broader perspective, Shooter (2010) suggests the body of empirically informed adventure education literature offers evidence that supports the fundamental effectiveness of adventure programming, but cannot yet communicate a complete understanding of why programs are effective.

There are many critics who doubt the extent of the outcomes of adventure education (Brookes, 2003a, 2003b; Gough, 2007). Even Hattie et al. (2007) qualified the inconsistency of the studies stating, "It is clear, however, that adventure programs are not inherently good. There is a great deal of variability in outcomes between different studies, different programs, and different individuals" (p. 77). While the outcome-based approach to research has been of some use in supporting educator's claims about the benefits of AE programs, it has not translated into understanding the experiences of the program participants nor the ways in which to make the most of these rewards (Allison & Pomeroy, 2000). Additionally, McKenzie (2000) argues that it is the quality of adventure activities (holistic involvement, challenge which is increased incrementally, mastery, and success/ failure) that is responsible for outcomes rather than the specific activities themselves. She suggests that the same

outcomes can be achieved using a variety of challenging activities and it is not the activity per se that is important, rather it is the quality or teaching/ learning approach employed in adventure activities.

More recently research is moving away from focusing primarily on the outcomes of adventure education and has begun to explore the more innovative pedagogy of adventure-based learning (Brown, 2006). Richards (1997b) deduced that the shift was mutually beneficial stating, "there is the increasing recognition that better outcomes will come from better processes and that therefore understanding processes is the primary route to gaining better outcomes' (p. 245). There is no magic activity – rather the process and the relationship (student-student and student-teacher) contribute to the ABL program effectiveness (Dyson & Sutherland, 2014). However, in addition to the lack of research about the process of learning, there is little research that concentrates specifically on elementary ABL, let alone it's place in international schools.

2.2.3. ABL in elementary Physical Education

Adventure Based learning has become more mainstream in secondary school physical education in recent years but is still emerging in the elementary arena and the research is accordingly sparse. For many years Project Adventure (PA) model has been the benchmark in ABL for younger learners. Early work from Dyson (1995) found that inter and intra-personal skills were not only developed from this program, but also that student voice was enhanced as a result. Give an e.g. Of this...Dyson (1994) also studied teachers' experiences of using this curriculum and revealed that the teachers shared common goals of building self-esteem and student responsibility, created a fun learning environment within physical education, developed a healthy attitude toward competition and used a holistic approach to education through student-centred teaching. Dyson (1994) concludes that adventure education is a valuable curricular approach in elementary physical education. Using the same PA model, Dyson and O'Sullivan (1998), then found that this adventure model provided two schools with substantive curriculum reform that had a major effect on school programs. In a move to formalize the PA presence in elementary physical education, Panicucci et al. (2002) developed a specialized elementary curriculum to meet the standards of NASPE. Though it has received positive reviews there is no evidence as to how many schools have adopted this as a formal part of their curriculum.

Looking across broader sections of education, Zmudy, Curtner-Smith, and Steffen (2009) investigated elementary and middle school students when following an adventure education camp and found that

participants had multiple and varied learning styles and experiences. There has been a recent drive for ABL from the perspective of PE teacher education (PETE) (Linehan, Hastie, & Dyson, 2010; Ressler, 2012; Stuhr & Sutherland, 2013; Sutherland et al., 2011; Sutherland & Stuhr, 2014; Sutherland, Stuhr, & Ayvazo, 2014), with some of these studies referring to elementary students. Most of the studies conclude that PETE does not adequately prepare trainee teachers for the rigours of leading ABL programs. Schwamberger (2009) covered the full K-12 spectrum and performed a comparative analysis between elementary, middle and high school PE teachers. Though he discovered there was no statistical difference between these levels, all teachers did in fact find processing a fundamental part of ABL. Some research finds that teachers and students report favourably for the use of ABL (Dyson 1995, Prouty et al, 2007). There is also recent qualitative research that gives students voice (Sutherland & Stuhr, 2012) and these types of studies should be encouraged as they provide insight into problematic issues that are seldom available in outcome based studies. However, while ABL might be promoted as an innovative curricular strategy, there is little empirical evidence with physical education to support such claims. Brown, (2006) states that many of the perceived benefits of ABL are simply teachers finding evidence that supports their beliefs? More research is needed to explore these areas and this is something this study aims to contribute toward.

Summary

This chapter has reviewed the literature surrounding the foundations of experiential learning and the effects that it had on creating Adventure Education, and its curricular theory model of Adventure Based Learning. Dewey and Kolb are authors whose ideas still remain current and are used in many of the essential elements of ABL. These elements are employing the full-value contract, offering challenge-by-choice, designing the sequence and flow of activities, utilising the experiential learning cycle and being aware of the teacher and their role as facilitator.

The outcomes of adventure education were then explored. There were several comprehensive meta-analyses that concluded that there were moderate effects but the general consensus is that outcome-based research did not provide enough conclusive evidence to assist the teaching and learning of adventure education. Particular reference was given to the stance the IB takes on including intrapersonal attitudes and interpersonal skills in its curriculum framework. It is important to note that the work from this study will contribute to the gap in the current research surrounding the facilitation of elementary student's adventure learning experiences.

Chapter 3. Methodology

In response to the research question identified earlier, the overall aim of this research was to examine my facilitation of an adventure challenge programme with a view to students improving their intra or inter-personal attitudes and skills. This chapter outlines the research design that I used and its justification. I begin with an introduction to action research and then expand my discussion into the more specific teacher-based action research methodology. This methodology allows the researcher to delve deeper into their own practice and provoke improved action through a continuous cycle of experience and reflection.
In this section, in an effort to illustrate how this methodology can be a trustworthy and rigorous form of research, I identify the ways I was able to poly-angulate my data sources, vary the methods of collection and how I used thematic analysis to process that data that was collected. I will explain the choice of participants and will discuss the many ethical considerations required when researching with children.

3.1. An overview of Educational Research

According to Saunders and Somekh (2009), we are continuously collecting and processing data as a normal part of our daily lives. We do this to make sense of the world in which we exist. This is no different in education where teachers and students are constantly 'interpreting' what is going on around them in the classroom. They carefully listen, observe and wait for responses to specific actions. Educational research is simply the formalisation of this process.

More specifically, we need research to establish if we are effective in educating our students. Expanding on the ancient Greek hierarchy of theory over practice, Hammersley (2002) suggests a distinction between what he terms as *scientific* and *practical* research. Verma and Mallick (1999) developed the following typology of research, which highlights 'critical differences between research that is oriented to the development of theory and that designed to deal with practical problems' (p. 11).

- *Pure or basic research.* Concerned with the development of theory and discovery of fundamental facts to extend the boundaries of knowledge.
- *Applied or field research.* The application of new knowledge to everyday problems. Though more practical it usually employs the same rigorous methodology as pure research.

- *Action research.* Research into specific practical situations carried out by practitioners to solve clearly identified problems in order to improve them. As such it is continuous and cyclical.
- *Evaluation research.* This is carried out to assess the effectiveness of specific projects to see if the original aims have been achieved. Many government-funded projects allocate a proportion of their budgets for evaluation. (Verma & Vallick, 1999, p. 11)

The latter three types of research have been more modern creations, devised in response to pure research having a detachment with the realities of practitioner work.

If the typologies are the tools a researcher uses then paradigms are the lenses used to look through when collecting and analysing data. The predominant views are generally split into paradigms of the constructivist, interpretivist, transformative, emancipatory, critical, pragmatism and deconstructivist (Mackenzie & Knipe, 2006). Rather than go into detail about each of these paradigms, the next section will describe why none of these paradigms was used in isolation in this study.

3.1.1. Action Research

Action research does not fit neatly into any one of the paradigms described above. Many consider it to be one of the few research methods that can actually encompass them all. Thiollent (2011) suggests that action research, in fact, offers a view of a "plurality of methods, operating in a multi-paradigmatic space" that makes it possible to avoid 'truth monopolisations" (p. 164). Action research is broadly accepting of many approaches and therefore avoids some of the extreme and exclusive approaches taken by others. Indeed, Reason and Bradbury (2008a) state that "Action research is a family of practices of living inquiry that aims, in a great variety of ways, to link practice and ideas in the service of human flourishing" (p. 1). They suggest that,

> *"A primary purpose of action research is to produce practical knowledge that is useful to people in the everyday conduct of their lives. A wider purpose of action research is to contribute through this practical knowledge to the increased well-being — economic, political, psychological, spiritual — of human persons and communities, and to a more equitable and sustainable relationship with the wider ecology of the planet of which we are an intrinsic part." (p. 4)*

In this sense action research can be split into the views of the practitioner trying to improve their own practice in their own context (Cohen & Manion, 1994), a researcher trying to bridge the gap between research and practice (Somekh, 1995) and the more global critical or emancipatory researcher seeking to use their findings to further society or realign power relationships (Kemmis & McTaggart, 1988).

Action research is based around a cycle of a practitioner-based inquiry into how to solve a problem or make a change in a practitioner's immediate world. The most important part of AR in McNiff's (2002) opinion, is that it is self-reflective. She states, "In traditional forms of empirical research, researchers do research on other people. In action research, researchers do research on themselves. Action research is an enquiry conducted by the self into the self. " (p. 2). In contrast to scientific approaches where the researcher must be objective, the involvement of the researcher in action research is seen as a strength.

What initially attracted me to the action research-based methodology was the synergy between the action research cycle and the experiential learning cycle. Kolb re-conceptualises the process of action research as "a spiral of action and research consisting of four major moments: plan, act, observe and reflect" (Zuber-Skerritt, 1992b, p11). These moments are very similar to the stages of learning in the ELC he helped create with the end-result being that whoever undertakes the action research or experience leaves the cycle with a deeper understanding of themselves or their environment than when they entered it.

3.1.2. Teacher-based Action Research

From the large family of action research methodologies I will be more specifically employing a Teacher-as-researcher approach. Cochran-Smith and Lytle (2009) define this as the "systematic intentional inquiry by teachers about their own school and classroom work" (p. 23–24). Dewey's (1921) notion of teachers as 'students of learning' invites teacher educators to engage in teacher research in their own classrooms. A broader definition might be any systematic inquiry conducted by anyone with a vested interest in the teaching and learning process or environment for the purpose of gathering information about how their particular schools operate, how they teach, and how their students learn (Mills, 2011). Souto-Manning (2012) argues that in addition to being systematic, AR should be sustained over a period of time that will allow the facts to surface. This involves methodical planning and the systematic collection of evidence to answer specific questions, which should lead to

changes in both the practice of the teacher and the progress of his or her students (Wang, Kretschmer, & Hartman, 2010). By following a cycle, the researcher utilises appropriate interventions to collect and analyse data and then to implement actions to address these educational issues, the results of which are reflected upon again to gauge whether any further action might be taken (Tomal, 2010). Finally, by being reflective and not accepting and following a set of ideas simply because that is what has been done in the past, McKernan (1996) argues that "reflective teaching supports professional growth and professionalism by the questioning of policies, problems and the consequences of action" (p. 45). Therefore, the key requirements to successful action research are sustained systematically, a cyclical approach and reflective teaching when attempting to solve educational problems, institute change and make improvements.

It is a useful methodology for teachers as being on the interpretive/ qualitative end of the ontological spectrum, it is unlikely to require deep statistical analysis. Also, as many other research methods are concerned with generalisability, teacher-based action research is more geared towards improvements within the context of the study, which in a teacher's case, is often in their classroom. Furthermore, in order for teachers to be effective, they must become active participants in their classrooms as well as active observers of the learning process; they must analyse and interpret classroom information and then use that information as a basis for future planning and decision making (C Mertler, 2014; Reason & Bradbury, 2008b). Mertler and Charles (2011) neatly summarize the reasons I elected to adopt this typology and are reviewed below -

- Action research deals with your problems, not someone else's.
- It is very timely; it can start now—or whenever you are ready—and provides immediate results.
- It provides educators with opportunities to better understand, and therefore improve, their educational practices.
- As a process, action research can also promote the building of stronger relationships among colleagues with whom we work.
- Possibly most importantly, action research provides educators with alternative ways of viewing and approaching educational questions and problems and with new ways of examining our own educational practices. (Mertler & Charles, 2011, p. 339–340)

As with any methodology there are limitations. Again, Mertler and Charles (2011) encapsulate these, describing as to what action research cannot do, below;

- Although its popularity has increased over the past decade, action research is still relatively unknown when compared to more traditional forms of conducting research.
- Although it may not seem the case, action research is more difficult to conduct than traditional approaches to research. Educators themselves are responsible for implementing the resultant changes, but also for conducting the research.
- It does not conform with many of the requirements of conventional research with which you may be familiar— it is therefore less structured and more difficult to conduct.
- Because of the lack of fit between standard research requirements and the process of conducting action research, you may find it more difficult to write up your results. (Mertler & Charles, 2011, p. 340)

The model I chose to adopt was that of Mertler and Charles (2011), because as mentioned earlier, their cycle closely mirrors Kolb's (1984) ELC model and gave me an opportunity to experience reflection in and on action as my students were experiencing it. As these authors contend, many of the action research models resemble each other and most essentially follow a cyclical or spiraling process that then reiterates onto a new round of research.

Action research cycle (Mertler & Charles, 2011)	**Experiential Learning cycle** (Kolb, 1984)
Planning stage	Planning
Acting stage	Doing
Developing stage	Observing
Reflecting stage	Reflecting

Table 4. Comparison between Action Research cycle and Experiential Learning Cycle

They are very similar in that they are both cyclical and involve reflection but the key difference between the two cycles is that the Experiential learning cycle does not have to sustained and systematic. The ELC can be a short individual process and participants can enter the cycle at different points. AR, however, depends on this rigour to ensure its trustworthiness.

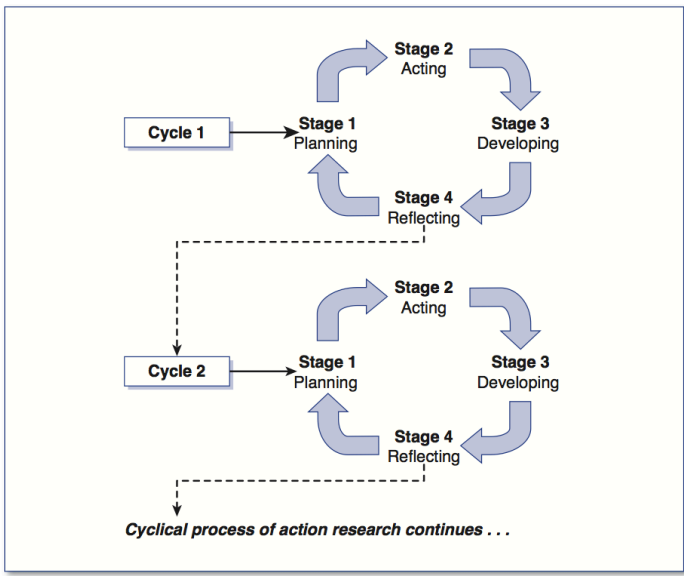

Figure 3. Mertler's Action Research cycle

The planning stage required I first had to find the problem that needed to be solved. Phillips and Carr (2010) describe this process as finding the critical question. Though research is essentially about asking questions and then gathering data to answer those questions (Clough & Nutbrown, 2012), I found that developing succinct research questions was not as easy as it sounded. Through basic observations over the course of my teaching career using the PYP, however, I was able to deduce that the over-arching problem was that I was unsure whether my facilitation practices were promoting positive student outcomes from the adventure challenge lessons I was leading. I wanted to find evidence to see whether that this has happened because of the way the program was facilitated and delivered as a result of my practice or if did not happen, then why not?

3.2. Academic rigour and trustworthiness

The ultimate goal of teacher-based action research is to use findings to make changes or choices in their own classroom (Thompson, 2002). Therefore action researchers must make their research accurate and credible, by striving to keep their data collection and analysis to a high level of academic rigour. Rigour in action research is typically based on procedures of checking to ensure that the results reflect only the particular perspective of the researcher (Stringer, 2007). At a broader level, Dick (1999) contends that action research tends to be participative, qualitative, action-oriented, and emergent, which he understands could be seen by some as potential weaknesses. To counter this he suggests how these same characteristics can actually be sources of rigour.

- Participation can mean more informants and therefore richer data. Involving participants as interpreters and co-researchers allows the assumptions of the researcher to be challenged.
- Qualitative data are to be found in conversation, in dialogue. If the appropriate climate can be developed, in the dialectic of conversation deeper understanding can emerge.
- Because action research is an action-oriented approach, plans are tested immediately in action. Action and research can inform each other.
- Above all, action research is emergent. As understanding grows, so action becomes better informed, and so does the methodology which is being used (Dick, 1999, p.4)

It is important in action research to be aware of a range of threats to rigour and trustworthiness. Tomal (2010) lists a variety of these threats: history, maturation, instrumentation, attrition, testing, differential selection, Hawthorne effect, researcher bias and contamination. The particular threats that I responded to in the research were;

- **Researcher bias -** because I was a practitioner-as-researcher and had the potential to unconsciously slant the results in a particular direction.
- **Testing**- which I was able to catch early in the first round when I realised the survey pre-test was going to be invalid as students were tending to give themselves higher marks for characteristics they thought the teacher would like them to have.
- **Hawthorne Effect-** where the students who were being interviewed may have been tying to please their teacher and may have influenced their replies as a response.

Once the AR model had been chosen, the research questions developed and the threats had been identified and minimised, I then needed to collect and analyse the data that would help answer the above questions. Throughout this process it was also important to be systematic and maintain a trustworthy approach when selecting participants and the methods used to collect data from them. These methods will now be expanded upon in greater detail.

3.3. Research methods

3.3.1. Data Collection

When using action research it is important to be able to accurately poly-angulate the range of data sources and methods of collection. Mertler (2014) defines it as “a process of relating multiple sources

of data in order to establish their trustworthiness or verification of the consistency of the facts while trying to account for their inherent biases" (p. 12). Lennie (2006) found that using multiple methods in action research enables the richness of the data to be illustrated, a diversity of participants to be given voice, and the interpretation of the data to be given from different perspectives. In my selection of data sources and methods of collection, I demonstrate how I address this need to be varied yet systematic.

3.3.2. Participants

Participants	Details
Teacher Self-reflection Journal	One separate journal for each round of data. 1st round = 18 entries between 300-400 words. 2nd round = 13 entries between 350-500 words. Incorporated the reflections from my co-teachers as additional perspectives.
Critical Friend Observations	Three observations by school counsellors. Prepared questions and discussed objectives prior to observation and then debriefed after the lesson.
Methods	
Group Survey	Four rounds of 9-12 question surveys (n=138 G5 & 146 G4) using Google Form format completed on students own tablets. G5 questions were predominantly multi-choice. G4 had more written answers required.

Semi-structured student interview	In first round of data, there were 16 interviews of 9 students. They ranged from 3-6 minutes in length and followed a set of questions that were then expanded upon, depending on answers.
Student self-reflection journals	69 learning journals for G5 students. These were digital and interactive, using Google forms, audio, photo and video recordings to reflect on what happened in the lesson.

Table 5. Data sources and methods of collection

One of the first questions to ask is *who* to study. Though I teach from age 6-11, my previous experience indicated that I would get the most detailed information from my older students, who were able to engage more reflectively and offered more opportunities of data collection. In this case, for my first round of data collection, the subjects I chose to look at were the entire Grade 5 cohort. My sample size was 4 classes of 22 Grade 5 students. They each only had a six-week unit of adventure challenge (as it is called in the PYP) and had 120 minutes of PE per week with which to conduct the lessons and assessment. The potential sample size was 88 students and I managed a 79% response rate based on ethical permission forms returned. The second round of data collection looked at the Grade 4 cohort, which was the same sample size as the Grade 5's and got a similar response rate (84%). These response rates are satisfactory as according to Patel, Doku, and Tennakoon (2003) there is a general consensus that "response rates of 70% and above are necessary to ensure that the obtained sample group is sufficiently representative of the target population from which its members are drawn" (p. 231)

3.3.2.1 *Personal reflections*

As a researcher-as-participant Lofland (2006) attests that it is important that I record all my observations as pieces of information and that they can come in the form of conversations, activities, meanings, participation, relationships and settings. Cohen et al. (2000) argue that this should "focus on the observable and make explicit the inferential."(p. 407). Using the same reflective practitioner principles adopted during the facilitation process, I was able to consider what I had seen in the

lessons. Of course this was my interpretation of the events but it is from an informed perspective. The danger lies in reporting what might favour the desired results of the study, thus jeopardising the trustworthiness of the data. My first few journal entries were more in a log format of recording events that occurred but as I got more comfortable writing about the feelings and frustrations that I saw emerging, the more detailed I became. My observations during the Grade 4 unit were more detailed as I had more time and more practice than I had had in the first round of data collection. Overall, over the two cycles of action research I had 31 entries ranging from 300-500 words per entry.

3.3.2.2 *Critical colleagues*

Involving other adults in a study that looked at the learning experiences of children was important in providing alternative perspectives from educational professionals. In the first case, I was team-teaching with another PE teacher and our teaching assistant. Before I recorded my own observations in my journal, I conferred with them on how they thought the lessons had gone and they often offered insights I had missed.

In the second-case, Physical education teachers are generally not trained in the complex art of facilitation. To get a better perspective of my facilitative skills, I asked two of the school counsellors to act as critical friends and come and observe four of my lessons in action. According to Goldblatt and Baskerville (2009), a critical friend is defined as a trusted person who asks provocative questions, provides data for examination through an alternative lens, and offers critique as a friend. I gave them each a different semi-structured format for the first and second lesson observation. The questions were open-ended but guided toward my interaction with the students and then the actions of the students themselves. I had pre-observation and post-observation interviews with both counsellors to ensure everyone understood the objectives and could communicate their thoughts. There were two observations made by one of the counsellors and one by another.

3.3.3. Methods

My principal forms of data collection were predominantly using qualitative methods, though there was a quantitative component to extend the diversity of tools used and to maintain a systemic approach. I decided to get a large range of methods and sources to add to the depth of the study. With hindsight, even though this range did add depth, it also required a great deal more analysis. I

used the major forms of qualitative methods including; participant interviews, qualitative student surveys, student learning journals, student reflections. I will now outline each of the methods in further detail.

3.3.3.1 *Group Survey*

Tomal (2010) suggests that group surveys are useful for studying large groups and detecting trend changes. Cohen, Manion, and Morrison (2007) agree and add that they can also be an effective way to gain structured data that can be administered without the researcher being present. They then go on to state that, "this should be counterbalanced by the time taken to develop and refine the questionnaire, the limited scope of the data and the likely limited flexibility of response" (p. 317). Each cohort completed two surveys during the course of their units, which corresponded to close to 360 responses. They generally took place during the second and fifth week of the unit to provide longitudinal entry and exit data points. The first iteration of the survey was carried out on a Google form and was solely made up of questions concerning student's semantic predisposition to the inter-personal skills they felt that had and what their self-perceived intrapersonal attitudes were.

The ease with which this form was completed using Google forms embedded into the student's electronic journal prompted some open-ended questions to be added to the end-of-unit form. I had initially wanted to represent this data quantitatively to measure the changes in these dispositions as the unit went on. However, upon reviewing the data mid-study, I discovered that validity would have been jeopardised due to the bias in the questions. For example, one of the questions that was targeted at identifying student's attitude of being open-minded read, "I listen to a person's ideas, even if I don't agree with them". Upon reflection, this was laden with judgement and also would have potentially encouraged students responding as they had been taught in lessons, rather than from their own sentiments. Using quantitative tools would have also added a significant load of statistical steps to an already heavy qualitative analysis. After seeing the depth of response from the open-ended questions in the Grade 5 end-of-unit survey, this became the sole form of data collection from the surveys in the Grade 4 units.

3.3.3.2 *Student Interviews*

Interviews enable participants- be they be interviewers or interviewees - to discuss their interpretations of the world in which they live, and to express how they regard situations from their own point of view (Cohen et al., 2007). I conducted 16 semi-structured interviews with 9 Grade 5 students over the first round of data collection. The questions would reflect the learning objectives of the lesson but would be open to go where the student or I thought it could go. I had intended to select 5 participants and follow them through the entire unit over 3 interviews. This changed however as some students would be absent on that day or were not that forthcoming during interviews. To select them I used purposive sampling, which is a sampling method where researchers handpick the participants based on the suitability of their characteristics for the research (Cohen et al., 2007). In this case I selected the students who I felt would be more confident speaking their mind and not be as concerned with my power position as a teacher. I also tried to get a cross-section of the cultures that were represented in the class. Once I had settled on a core of 4 students, we established a rapport and the results were a lot richer. Tomal (2010) contends that establishing a trusting relationship with the interviewee is crucial in obtaining quality data. The first few interviews were difficult and were often over in a few minutes but as they progressed I got better at paraphrasing and asking probing questions that elicited deeper responses. I record the interview using the microphone function on my computer and then transcribe the interview at a later date. I could also write directly if I observed any other behaviour such as a happy/frustrated face, shoulder shrug or struggling to answer.

3.3.3.3 *Student Learning Journals*

As an alternative form of assessment, each Grade 5 student had their own learning journal to record their thoughts from the lesson and this was then submitted as part of a Portfolio. Gregg (2009b) promoted the benefits of using a reflective journal during an adventure experience as they allow

- students to express themselves in a safe, confidential environment
- shy students who are reluctant to speak in a group setting to have a voice
- for active learning through reflection and idea development over time
- learning objectives to be clearly articulated and processed at the student's own pace
- students to become responsible for their own learning

Whilst all of these features were evident, some of the disadvantages also became apparent as the time commitment, the struggles of the English as an Additional Language (EAL) students to cope with the language-rich nature of journaling and some of the mundane procedural rather than reflective writing that occurred, These factors blunted the overall effectiveness of the journal as a research tool. However, some of the data was the richest in the whole study. This may have been because digital journals were designed to be interactive, using Google forms, audio, photo and video recordings to reflect on what had occurred in the lesson. The questions in the journals were guided and tried to tap into the more affective side of the learning experiences.

3.3.4. Data Analysis

Data analysis involves making sense of data in terms of the participants' definitions of the situation, noting patterns, themes, categories and regularities (Cohen et al, 2007). Phillips and Carr (2010) suggest that this stage of the research journey is the part with the least signposts and the most uncertainty and challenge. (Gibbs, 2007) contends that this analysis implies some sort of transformation from starting with a large collection of data, processing it, using analytic procedures into a clear, understandable, insightful and original analysis. Lichtman (2013) goes on to argue that, while data analysis is about process and interpretation, there is no one right way. Because analysing qualitative data can be such a daunting exercise, the first task of analysis is to reduce it into a practical manageable amount. The second objective is to then to interpret this reduction.

As I had a vast array of data from a number of different methods, organisation of this data was of paramount importance. I decided early on to use specialist software to manage all of sources and to help code and interpret the data. Using the Nvivo program allowed me to enter all of the data sources in their original form and keep them all in a centralised digital format. This was only a challenge with the student reflection journals as although they were digital, there were many drawings within them that could not be formatted so I had to go through and individually scan them manually. Prior to inputting all of these sources, the data seemed quite overwhelming. It was important at this stage that the data is reduced and then selected from. An analogy I found useful was comparing the data as displays in a museum but choosing to only really concentrate on the ones that are meaningful to me. I was therefore not completely objective, as all research is arguably subjective-based in our understandings of the world (Carr and Phillips, 2010). To avoid the study simply being a self-

confirming exercise and to maintain academic rigor, it was important to be systematic from the outset.

I then used a thematic approach to code the data, which in the early stages expanded quite quickly. Gibbs (2007) states that, "coding is a way of indexing or categorising the test in order to establish a framework of thematic ideas about it" (p. 38). In Nvivo these categories or themes are called Nodes; parent nodes for over-arching themes and child nodes for sub-themes or categories. As I analysed the data I was able to use these codes to pull out areas of interest and put them into a Parent nodes. The further into the data analysis I went, the more Child nodes I created to cater to the different directions the data was heading. What became intriguing was when I was able to triangulate the data and see common themes from differing data sources. This in turn helped to redefine or strengthen the original Parent nodes. The important thing was that I was able to keep an open mind and become intimate with my data. By the end of the first round of data collection, I had 79 different Parent and Child nodes with 1638 references from a possible 637 sources.

Creswell (2012) advises that it is better to have a smaller number of themes so that the researcher can provide detailed information about a few themes rather than general information about many themes. Therefore, I began to search for links and relationships between the themes that had emerged so that I had a more succinct, in-depth analysis with which to begin developing findings and recommendations. Reducing the number of themes from a potential thirteen to a more manageable five helped to realign the objectives heading into the second round of data collection as I was able to make changes in the units to reflect these findings. I titled these themes - "Intra or Intra; Being Heard; The Art of Facilitation; Know Thyself; Know your students".

3.5. Ethical Considerations

Though teacher-based action research allows in-depth analysis of how to improve teaching and learning it also carries potential for harm to its participants. Nolen and Putten (2007) contend that in a school setting, the teacher is acting not only as the researcher but also as the change agent and these potentially conflicting roles can confound the individual's primary objective in the classroom or school: student learning. They reiterate that teachers must subscribe and adhere to the agreed ethical behaviour of researchers— respect for persons, beneficence, and justice.

Although I was conducting this research to improve my own practice, I was in a power relationship with my students who may not have felt free to refuse consent to be interviewed. Secondly, as the research may change as the project progresses, the consent given at the outset may not apply as the direction of the study shifts. Finally, as I am their class teacher, the student's relationship with me may be easy to deduce, which raises issues of confidentiality.

To help address these ethical concerns I gained prior informed consent from the students and their guardians and reviewed ongoing consent with the students as the study continued. My upcoming research was explained in detail during open class discussions with the students and there were many valid queries and concerns that arose. The students and their guardians were given individual information sheets and consent forms in language appropriate formats. To ensure anonymity in this presentation of the findings, pseudonyms are used for the participants and the school name has been changed to ensure confidentiality. I gained ethical approval prior commencing the study (Appendix 1)

Summary –

The research process for this study was systematic and sustained. Using a teacher-based action research methodology allowed me to isolate the root of what I wanted to improve in my practice and then encouraged me to collect from a multi-layered poly-angulation of data sources to establish how this might be done. This provided multiple lenses with which to view the same problem and gathered a range of different voices to challenge my assumptions. The major benefit of using an action research methodology was that I was able to reflect upon the challenges and successes of the first round of data collection and make modifications when planning the next round. Though this, in turn, created new challenges it helped me to address some of the primary concerns identified. The constant reflection throughout the research cycle meant small changes were able to be made to add richness to the data.

The range and depth of data collected needed to be analysed efficiently so I used a digital coding software program (NVivo) to organise the data into nodes. A thematic approach was then used to categorise these nodes and group them into five broad themes.

Ensuring academic rigour and trustworthiness of the data was crucial in giving credibility to the research. To hold to an ethical position, a researcher-as-practitioner is required to identify the potential risks involved researching their participants and design steps to mitigate them. In this case the issues were of confidentiality, the inherent teacher-student power relationship and potential changes in consent. These were off-set by detailed explanations of the research, assurances of respect for decisions, and ensuring anonymity for participants in the final presentation.

Chapter 4. Results

The findings from the two rounds of data collection of group surveys, critical friend observations, student interviews and student and teacher refection journals are presented in this chapter. The data sources were all analysed for themes that emerged within and across the responses. Five themes emerged in the process and each of these are expanded on in this chapter.
The themes that were identified can be split into two categories; that from the student perspective and that of the teacher-as-facilitator. These themes in turn link directly with the identified research questions. It is important to note that these themes do not exist in isolation, rather they co-exist and inter-connect.

4.1. Introduction to themes

The results of the research were wide and varied but were eventually consolidated down to five broad themes that aligned to answer the two research questions created at the outset of the study.

1. How does adventure-based learning affect inter-personal attitudes and intra-personal skills in elementary students? – Student perspective
2. What are the most effective methods of facilitating adventure-based learning activities to enhance elementary students learning experiences? – Teacher perspective

The first two themes align with the first research question and address the effects of ABL on the participants in this study. The last three themes align with the second research question and are more from a teacher perspective, looking at considerations that had to be made while facilitating the two rounds of the study. Each of these five themes are explored in subsequent sections.

- Inter or Intra – Comparing the interpersonal and intrapersonal effects of ABL.
- Being Heard – The importance of having effective communication skills in ABL
- The Elusive Art of Facilitation – The challenges of balancing pragmatism and effective facilitation.
- Know yourself – Understanding the role of the facilitator.
- Know your students – Understanding the many needs of your students

4.2. Interpersonal or Intrapersonal skills and attitudes

This section looks at the correlation between intrapersonal attitudes and interpersonal skills as outcomes from the ABL process. In their meta-analysis, Hattie et al. (1997) point out that adventure education had a small to moderate effect on interpersonal and intrapersonal outcomes. Their results were inconclusive as to how these outcomes were reached and this is corroborated in this study as though some students identified changes in attitudes, it was difficult to ascertain why and when these occurred. It was discovered that though both showed signs of improvement over the two rounds of the study, the attitudes were harder to predict and measure compared to the skills. The effects ABL had on these attitudes will be examined, including self-awareness, which is an intra-personal skill that had inter-personal implications. The effects of ABL on inter-personal skills and the ramifications this had on the teaching and facilitative process will then be discussed.

4.2.1. Intrapersonal attitudes

After the first round of data collection I discovered that it is difficult to plan for specific attitudes, dispositions or traits to be learnt. It was found that though the same opportunities for the learning to occur were provided, different students took different things from the same experiences. As physical education teachers we do have more influence over are the interpersonal skills because they are just that, finite pieces of information and ways of doing that can be acquired with practice, they provide the right environment is created. By teaching the skills the attitudes they can then hopefully be drawn out. To that end this is what I focused on in my second unit and this drew further responses through the participants' communications, which has its own sub-chapter.

Activities in each adventure challenge unit were designed to sequence and build on certain characteristics and attitudes in the students. At the briefing stage of each lesson students were directly front-loaded with a learning intention of what skill or attitude they might want to concentrate on for each challenge. Direct front-loading provides the intention of "specifically highlighting the learning that is about to take place before, or in front of, each adventure activity" (Priest & Gass, 2005). It is inconclusive whether this facilitative approach elicited the dispositions or skills intended. Where the deeper thought about their own or others' actions usually came about was during the debrief or their own self-reflections afterwards. Quite often their reflective journal had prompts for

them to help process their experiences and this elicited the most and deepest responses regarding students' inter and intra personal skills or attitudes.

Whilst I couldn't use it as a statistical comparison it was interesting to note the how the students rated their own attitudes. In the Grade 5 group surveys, for example, the attitude of 'persistence' was couched in the statement 'When I start something I finish it'. From the first survey at the start of the unit 19% responded they did 'all of the time', 66% said they 'usually' did, and 8% said they did 'some of the time' (n=78). In the second Grade 5 survey conducted at the end of the unit, the results were nearly identical (19%, 69%, 6% respectively).

Persistence - When I start something I finish it'	All the time	Usually	Some of the time
Grade 5 Pre-survey	19%	66%	8%
Grade 5 Post-survey	19%	69%	6%

Table 6. G5 Survey results from the attitude of 'persistence'

However, when looking at the other data from their learning journals the word persistence occurred frequently. Individuals had comments like,

"I think I achieved my goal to do things even though I don't like it because sometimes it was an activity that I was frustrated with but I never give up and kept on trying" Henry's learning journal"

Some students referred to the team attitudes;

> *"I think we persisted well with this one (stepping stones challenge) because even when the other team finishes, we still continued and not being distracted with others winning". (Nanjuka learning journal)*

This demonstrated either that the survey was inaccurate as an instrument or that these attitudes or dispositions had always been present in the students and may not been influenced by the challenge or my facilitation of it. Therein lies the problem with trying to change attitudes as a goal for a unit, in that there is no real control over what students will take away from a learning experience (Sibthorp et al., 2015). As stated by Thomas (2010), "this can create problems for educators who try to use experiential learning approaches to teach particular content or focus on particular issues, because it is not possible to guarantee the nature and extent of the learning that actually occurs" (p. 245). Even within the same groups doing the same challenge, different students reported to have taken away alternative outcomes, depending on a range of factors, such as their role in the team, mood at the time or whether there was tension in the team.

The most common intra-personal outcomes that came through in the data from both the student learning journals and the surveys, were persistence, confidence, effort, courage, patience, respect, appreciation, caring, flexibility, open-mindedness, pride, empathy, enthusiasm and positivity. These are all traits that we encouraged throughout unit but they occurred inconsistently at different times for different students, or not at all with some, even though the challenges were the same. They are also abstract and subjective concepts that many students, particularly the EAL learners struggle to articulate. This in turn makes them difficult to measure, which does not mean they are not important to foster, it just means teachers and researchers need to find a more accurate tool to gauge what is being learned, a tool that I did not have. This extract demonstrates the difficulty in relying on simple survey questions to determine attitudes and dispositions -

> *"What attitudes do you think that you improved on over the course of this unit? 31% said they improved their cooperation, 21% creativity and 14% respect. Interestingly empathy, integrity and tolerance scored low 0-1% but this may because they were not explained or understood as much as the other options."*
> *(Entry 9 - My G4 learning journal)*

Some attitudes that were more consistent than others were confidence and patience. Following the low-rope adventure course or when climbing over the wall challenge, many of the students talked about over-coming their fears and needing courage. A common comment that was expressed was;

> *"I feel proud of myself because I was brave on doing challenges".*

(Sandra's learning journal)

These sorts of comments are the reflections that inspired me to research the field of ABL further. The fact that this particular student, as well as many of the other students, is from a culture that discourages risk-taking and still managed to move well into their stretch-zone, thus creating moments of personal growth and improved self-efficacy, points to the benefits of the adventure education. Many of the students had not had to step outside their physical or emotional comfort-zone at all and were unaware of their they were potentially capable of achieving. As a cultural generalisation of many Asian students, academic pursuits are usually given priority and opportunities for physical exploration and individual or group problem-solving are rare, which is why some of the improvements in self-confidence are so evident.

Tolerance was also an attitude that was often mentioned.

> *"I have improved, but I still get frustrated with my group when we don't succeed. However, I have developed an important factor of patience". (Syblile's learning journal)*

This may have something to do with the international school context in which we are based. It is highly multicultural with 67 countries being represented and where being different is normal.

As part of developing a balanced student within the IB curriculum, many of the above attitudes are required to be explicitly taught across the range of subjects and grades. This means students are exposed to the language, but again it is not possible to force the transference of the concept and all a teacher can do is provide a fertile moment for this to potentially germinate, for which ABL provides a perfect soil. This does, however, create a dilemma when referring to how we might know whether these transferences have taken place or not, and what they might be attributable to.

4.2.2. Levels of self-awareness

An interesting finding was the high level of self-awareness that the students had, considering the extent that they were potentially exposing their feelings. During the group discussions many, but not all, students were able to clearly articulate their thoughts and ideas. This is explained in further detail in the following chapter. However, almost universally, students were able to reflect in their learning

journals, surveys or interviews with a level of honesty and candour that I was surprised by. This may be a by-product of studying in the PYP learning environment, where being self-reflective is taught as an intra-personal skill right across the school and is an integral part of formative and summative assessment.

The central idea of the Grade 5 unit was titled -Being self-aware can help you and your team work more effectively - so there was some precursor as to what was expected of them. The Grade 4's did not have the same learning objective, yet they had particularly honest views of themselves and their actions in their survey responses. This may have been because it was confidential or perhaps they were able to communicate more through writing reflectively than they could during group discussions. Perhaps it could have been a cultural assertion that they did not want to stick out from the crowd. Some examples of the honesty that some students exhibited, are demonstrated from an extract from my journal,

> *"A quote from Henry when asking him how he felt after the rope swing was "It's like my head and my gut are having a battle" However, not for Anh Pho who said "why do I need to be able to swing on a rope, I'm going to be in an office for the rest of my life". Though he did admit that he was disappointed with himself." (Entry 11 – My G5 Learning Journal)*

Self-awareness is in a grey area of being both an intra-personal and inter-personal skill and was therefore easier to teach or harness than provoking an intra-personal attitude. Students who were more aware of themselves and their actions were able to relate to others more easily, or at least understand how their actions affected others. Learning journal prompts could rouse students to go as deep as they liked in their own self-reflection. Some of the responses were highly introspective for 10 year-olds. There are many I could use but this one from a normally shy boy demonstrates the point well-

> *'Something I think I need to work on about myself is to control my anger because most of the times people think my ideas wouldn't work and then they say let's go with someone else's ideas rather than mine so I get really angry and just stay with myself and not talk to anyone else. I think I could be less bossy because sometimes I just think I'm the most important in my team and kind of tell them I can do anything I want to do.' (Mahmud's learning journal)*

On the surface, I would not have picked up any of this but this is the impression he had of himself and the fact that he recognises his feelings speaks loudly of his levels of self-awareness. This was toward the end of the unit so it would have been interesting to have seen his thoughts at the outset. Again, I could not say whether these heightened levels were due to the focus in the G5 unit or whether this could be attributed to the overall learning environment within the school. This would prove to be an interesting study in itself.

From the final Grade 5 survey, one of the questions was – How did this unit affect your self-awareness when working with a group?. Many of the answers were representative of this one,

> *"A lot-I'm always trying my best now, and I'm able to see myself from other's point of view." (G52 Survey Results)*

Armed with the skill of self-awareness, students are more likely to make meaning from an experience if given adequate time to reflect upon it afterwards. It may be that in the heat of the moment students revert to a mindset they had entered the challenge with but at least with this reflection they will hopefully become more cognizant of the effects of their actions. The social constructivist would argue that the student might be in fact reacting to the social context they are situated and they may exhibit different behaviours in a different setting.

4.2.3. Interpersonal skills

Similar to the intra and interpersonal skill of improving self-awareness, the element I felt that I had more influence over was teaching the inter-personal skills required to help to improve team dynamics or increase the chances of success in a challenge. Through planning the sequence of activities, providing teachable opportunities through the challenges, front-loading and debriefing the experiences and then structuring the reflective moments, I could equip the students more tangibly, if still at an abstract level. In their Project Adventure curriculum for the elementary, Panicucci et al. (2002) suggested the development of skill foci should be trust-building, cooperation, communication, problem-solving and coping with stress. I followed their recommendations when sequencing the learning experiences for our units. For each of these lessons I was able to provide opportunities for implicit learning of the skills or was able to give explicit processes to use when faced with a challenge.

From all the data sources it was conclusive that the most useful skill was that of being able to communicate successfully and this is recognised with its own sub-chapter (4.3). After that, the next inter-personal skill that students identified with the most was the ability to cooperate with team-mates. One of the major premises behind adventure-based learning is that when students work in groups the challenges are designed so that cooperation is usually crucial for success. This forces students to come up with strategies to ideally utilise all the team member's strengths to be able complete the challenge. One strategy we gave the Grade 5 students was to use team roles, based on Honey and Mumford's (1992) group roles, to recognize which was their natural tendency to fulfil during group work. The potential roles, as described to the students, were

- Organiser – Person who makes sure that the team knows what to do
- Doer – Would rather just work on the task-at-hand than talk too long.
- Challenger – Wants to achieve challenges and questions people's ideas or what the group is doing if it is not happening.
- Supporter – Wants to make sure the team is happy and not in conflict
- Thinker – Comes up with different ideas of their own or combines others

From there they were able to see what their own and their team member's reactions were likely to be during situations. It also gave them a chance to see the perspective of their team-mates.

> *"I thought I was an organizer but when we played the activity 'mission impossible' I realized that I am actually a thinker". (G52 Survey response)*

Using these team roles was useful for students to see how they fit into a group and that if their group was unbalanced in its composition, whether they would need to make changes and who might be willing to adjust their role for the benefit of the team. They referred to these roles often throughout the rest of the unit. However, they oftentimes struggled differentiating between roles or would feel like they were one when other people thought they were another. This caused consternation, particularly when they were asked to adopt a role they would not normally identify with.

There were a lot of positive feelings surrounding the area of cooperation when challenges were successful, as demonstrated in these student interviews,

> *"Me: When did you feel as though you cooperated today?*

KL: When we got tossed a hoop, it landed far out of reach so I held Sally's hand to help her reach farther as she reached for it. We cooperated because we did it together and because Sally needed me and I needed Sally in this activity.
Me: How did it feel to co-operate?
KL: It felt good, like I was really important and had a role to play. I felt brave, too, because I knew that I had others cheering for me and that, even if I failed, they wouldn't get mad". (Krista's 2nd Interview)

"How did it feel to co-operate? It felt good because we depended on each other and it was more hard to fail because we all cared and we had something to be happy about". (Anh Pho's 1st interview)

This was also dependent on the type of environment created at the start of the unit using the FVC, one of the cornerstones of ABL. If groups managed to stick to their agreements of mutual respect and support then members felt more comfortable to step outside their comfort zone. However, if teams did not adhere to their FVC, and the supportive climate that this can create, then negative signs quickly set in-

"I thought that it was really frustrating doing the blind piece the body together activity. My group couldn't cooperate so we kept getting into fights." (Suzy's learning journal)

When team members were not cooperating it was generally obvious to the rest of the group and if they managed to recognise the source of tension they could usually solve the problem themselves. If the negative behaviour continued then I tried to bring it in during the debrief to make sure everyone was aware of how that made people feel.

4.3. Being heard

This section talks about the desire of all students to be heard by their peers or teachers. From the first round of data the most common sources of tension and frustration were when ideas were not freely listened to, understood or acted upon. This chapter will also address those children who wanted to be heard but were too afraid to contribute their ideas, for a number of reasons. The second round of data was collected around a unit based on students learning communication skills so that they could deal with these tensions more explicitly.

Priest and Gass (2005) define effective communication in adventure education as "an information exchange between two or more people that results in a behavioural change" (p. 260). The meta-skill of communication is a deeply complex example of an information exchange. Humans have refined it to such a level that there are hundreds of thousands of different words, gestures and symbols containing information that is transmitted and decoded by other humans as part of a continuous exchange of data. Students are often expected to learn these skills autonomously and the messages sent or received can be nuanced and misinterpreted, which in some of the pressure situations in ABL can have stressful results. Communication should therefore serve as a catalyst for participant growth by providing a medium for reflection in and on experience (Priest & Gass, 2005). Raiola (2003) concludes that it is the facilitator's responsibility to role model effective communication by being a trustworthy and credible sender and an active-listening and observant receiver.

This is why it became evident after the first round of data collection that we were asking our students to engage in higher level thinking problems that required effective communication skills to solve them without actually providing the tools necessary to be successful. It is all very well to implore students to communicate to each other in order to be an effective team but there are discrete processes that need to be learned in order for this to happen. Students who have not mastered or do not have access to these skills find themselves with the right motivations, a good idea or the willingness to cooperate but without the connections with others required to follow through on these intentions.

4.3.2. Breakdown in Communication

The communication-related problems occurred at four different stages of the challenge process. For the purposes of explanation I will use Greenaway's (2002b) simplified ELC (Plan – Do – Review) model to describe this process.

Figure 4. Greenaway's Plan-Do-review Facilitation model.

The first occurrence of communication problems would happen during the briefing part of the Planning Phase when accurate listening was required. Key information was passed on regarding the rules and boundaries of the prescribed learning activity and this was often not processed. This was also a chance to ask clarifying questions that would have helped the students with their challenge. Metaphors were a part of the front-loading and were often quite complex, so much so that without engaged listening, they might be missed. In this entry in my learning journal I am expressing my confusion and frustration over whether my instructions were clear enough, too detailed or just beyond the students grasp,

> *"I am not sure the briefing was that successful for the 'helicopter carry' as nearly every group got it wrong. I am not sure whether it was that my instructions were too detailed or whether they just weren't listening. In saying that, there was a group who did follow the rules and made it across so maybe it was a combination of the two."*
> *(Entry 3, My G5 Learning Journal)*

The next communication-related source of tension would be during the idea-creation part of the Planning phase. This area of interaction was by far the most reported source of frustration amongst students. A common thread in many of the student's learning journals is encapsulated by this student,

> *"My most frustrating time was when someone wouldn't let me share my ideas! " (Arran's, Learning Journal)*

Losing agency and voice over any decision, regardless of its perceived importance, can be a distressing situation. When you are a student who has little control over their own decisions in other areas of home or school life, the effects can be magnified. Particularly if you genuinely believe you have a valid solution to a problem.

The students were fully aware that they needed ideas to solve a problem. The typical scenario looked like this. Soon after the briefing and groups were sent away to brainstorm, there were generally some more dominant students who were more likely to be comfortable voicing or sharing their idea, regardless of its efficacy. A quote from one of these students demonstrates this -

"I think that I communicate like a lion-I talk over everyone, I want to dominate my group, and I want my ideas to get chosen. I don't listen to others very well, so I need to work on that, as well as my open-mindedness (I don't accept other's ideas very well, so I'm not that open-minded)". (Katie's Learning Journal)

They were quite often the same students each time. Others were more considered or even reticent with their opinions and some group members or outsiders often construed this as a sign of non-participation in the idea-creation process. The dominant team members would often then forge ahead with one of their ideas, without listening, to the other member's ideas, leaving them feeling disenfranchised, voiceless and frustrated. Their options are to not cooperate, which risks them appearing like poor team players to the teacher and peers, or to acquiesce and go along to save face. Other factors that compound this situation are when an introverted student finally had an idea they thought was worthy of sharing and they were 'shouted down' as a more dominant members 'square' idea was forced through a 'round hole' because of their force of will. Time and task constraints also put the problem-solving process under pressure. In my context, English an an Additional Language (EAL) learners are also at a further disadvantage because they have the ideas but cannot articulate them well enough to persuade the group of their viability (Gomez & Jimenez-Silva, 2012).

The next occurrence of communication-related tension was during the 'do' or action phase of the challenge where students would sometimes use negative or unconstructive language when trying to negotiate their way through a difficult part of the activity. The most common sources of communication tension that would occur during this phase would be when students would yell, argue, or misunderstand each other -

"I kept screaming at my group mates because I needed to tell them something very important but they almost never listened to me." (Melissa's Learning Journal)

"I think that our group kept on arguing over each other. I think we could've done better if we were cooperating better." (Mayula's Learning Journal)

"(The most difficult challenge was) the Black Hole as there were people having conflicts in this task because of the logic that went behind who should go first or who should go last." (Ji Kwon's learning journal)

The final phase that would see communication-related tension would be during the debriefing where students would be sometimes be unable to articulate their feelings about what had happened in the challenge.

4.3.3. Acquiring communication skills

Developing effective and respectful communication skills is the main objective of the fourth step of the PA adventure sequence. Schoel et al. (1988) mentioned that it is important to prepare the group to work together before placing them in complex problem-solving activities. They wrote:

> *[Communication activities] provide an opportunity for group members to enhance their ability and skill to communicate thoughts, feelings, and behaviours more appropriately through activities, which emphasize listening, verbal, and physical skills in the group decision-making process. (p. 69)*

The problem was that by strictly adhering to this PA sequence it meant that only one of the ten lessons had a sole focus on communication skills. This translated to 3 activities over 36 minutes in total, which was never going to be enough time to convey the importance of building these effective communication strategies and then being able to provide a context and learning experience in which to practice them. Within the six G5 groups that were doing the activities there were a large range of communication challenges and issues occurring simultaneously that could have been mitigated with more time and reflection opportunities.

This reaction is typical of the sorts of comments that came up in the reflection journals and when facilitating group discussions -

> *"Because a lot of people is speaking at once and some people think that people aren't listening to them and then our group doesn't work well because there is barely anyone listening". (Shae's Learning Journal)*

Some activities were engineered to place communication pressure on the groups to test what was the most effective way for them to collaborate. An example of one of the activities was the "Emergency room" where members of the group were blind-folded and had to assemble a jig-saw of a skeleton by

only using the directions of their sighted team-mates. As this entry from my journal denotes, the communication skills needed to succeed were simply not present -

> *The 'Emergency room' started off well as they had a good plan but then the girls didn't want to go with one of the blind boys so he was abandoned and his character lead him to goof around and not find a solution. There was a lot of yelling over one another and not a lot of listening so as the challenge went on the progress diminished significantly. We discussed this in the debrief and I tried to guide the questions back to their communication rather than the challenge. I had to steer quite hard as they were set on blaming their failure on people fooling around, which was partially true, but once they figured out that inability for people to listen slowing them down they realised how loud they had been." (Entry 6, My G5 Learning Journal)*

This entry also demonstrates two instances where the teacher must be hands-off, both in letting the challenge run its course unaided and in the debriefing by not spelling out a groups errors for them and letting them reach the conclusion under their own auspices, albeit with deliberately facilitated guidance.

The students realised the challenge, understood the parameters and even knew that the focus was on communication and yet they could not articulate the necessary sending and receiving of information to complete the task set. If the students did not gain any strategies from this lesson then they had to complete the rest of the challenges in the unit without one of the most important inter-personal skills. This meant that they were prone to making the same communication mistakes repeatedly for the remainder of the unit.

There were some students who developed strategies independently, as some of the responses indicated.

> *"Q: If you had to choose an animal on the right that represents how you think you communicate, which would it be, and why?*
> *A: Hippo because hippo's are amazing at listening. I have seen them listen from 200 Meters. They take time to listen and think and when they are done they have the best ideas". Koko's Learning Journal*

These students were often some of the quieter students, who classified themselves as "Thinkers" under Honey and Mumford's Team Attributes Model (1992). However if the composition of the group was low on thinkers then communication issues invariably arose. There were other introverted students for whom speaking in a large group setting was terrifying as demonstrated by the answer to the following question.

> *"Q. When was a stressful time for you or your group and explain how you dealt with it?*
> *A. When group made me talk." (G5 end-of-unit survey)*

4.3.4. Communication in action

After the first unit we deduced that 'Communication' was an important enough skill to base a second unit around. Previously it had been a focus for a single lesson but had been referred to constantly as something that was required for success but not articulated as how to achieve it. This would then be the platform for the second complete round of data collection as part of the action research cycle (Mertler, 2014).

To frame the unit we followed the curricular requirements of the IB Approaches to Learning (ATL) and the PYP transdisciplinary skills, which have a recommendation for including communication skills, without actually providing guidelines on how to implement them. In this case the broader ATL is 'communication' whilst the PYP transdisciplinary skills are listed beneath it; Listening, Non-verbal communication, Presenting, Speaking, Reading, Writing and Viewing. We decided to dedicate at least one lesson to each concept.

The IB defines ATL's as "deliberate strategies, skills and attitudes, which permeate the teaching and learning environment. These approaches and tools, intrinsically linked with the learner profile attributes, enhance student learning and assist student preparation for DP assessment and beyond" (2010, p. 34). There were several interventions we included, such as following an active listening protocol (Hoppe, 2006; Jalongo, 1995)using feedback or clarifying questions (Priest & Gass, 2005), utilising a ''talking totem' (Gass, 1993), using positive communication strategies (Midura & Glover, 2005) and peer observation (Topping, 2009).

The G4 end-of-unit survey results yielded these interesting results, particularly that of active listening and clarifying questions which we taught simultaneously. These interventions will now be discussed in further detail.

Communication skill	Which communication skill or skills (if any) were most useful for you during this unit?	Which communication skill or skills (if any) would you use outside of PE class?
Active listening	70%	64%
Clarifying questions	55%	44%
Body Language	38%	45%
Encouraging someone	27%	33%
Writing ideas	32%	25%
Observing others	22%	24%

Table 8. G4 survey results regarding communication skills

The Active listening protocol addressed one of fundamental needs identified by the students in the first round of data collection of a desire to be heard. I drew upon Hoppe's (2006) six skills of active listening and adapted them to a child-friendly mix of ensuring an open mind, avoiding distraction, paraphrasing, and summarizing their thoughts. The students used the protocol effectively and understood that it would only work if consistently reciprocated by all members in the team. They also appreciated a structure that allowed everyone a voice.

In response to a survey question of 'How could you tell if you were being listened to?' these answers were representative of the student's understanding

> *"They were focusing on me and paying attention. They would also sometimes ask me questions during my speech so I know there listening".*
> *"People were looking at me, and were nodding occasionally. They weren't fiddling with anything, and sometimes asked for clarification".*

"if they make eye contact and they are facing you and asking many questions." "People were looking at me and after I was finished they asked questions." (G4 Survey 2 responses)

Using a 'talking totem' (Gass, 1993) allowed students to have a legitimate voice and all of the privileges of being the speaker. All students had to actively listen to whom ever had the totem, which in both units took the form of a stuffed monkey beanbag. When the speaker was finished they could pass it on to the next person. It was effective predominantly because of its simplicity, as exemplified by this statement,

"(The strengths of my team were) They did not speak if they didn't have the space monkey. They also had to respect whoever was talking. The members of my group had eye contact with me and they did not cut through my speech." (Grant's G4 Survey 2)

It was also a strategy that required practice and refinement depending on each group's requirements, as demonstrated in this extract –

"The talking monkey worked really well and will be a good tool once they are used to it. I need to explain that if you want to talk you need to request it". (Entry 3, My G4 learning journal)

The totem also had the potential to become a source of tension when group sizes were larger and not everyone got a chance to speak.

"The most frustrating challenge was the mission impossible cause when Brad got the monkey he only passed it on to his friends and they don't really think wisely and they don't ever let anyone talk about the problem". (Dylan's G4 survey 2)

The positive communication strategies we used during the speaking focused lesson stemmed initially from a challenge during the G5 unit where there was a lot of negative talk. Midura and Glover (2005) recommend teaching how to praise and encouragement as a separate communication skill. Students had to describe what negative behaviours they had seen or heard and then explain what positive behaviours they would like to see or hear. This extract from my learning journal reflects how satisfied

I was with the students learning this discrete skill, and also some reflections that to build on for the future

> *"The challenges were fun and I think there was a lot of positive communication. This was demonstrated in the final debriefing, with the majority of groups feeling as though they had been positive with one another, being able to cite different praise comments and encouragements they had heard. Not everyone completed the objective but I feel like they at least understood the concept, and at least didn't engage in negative pressure. I would consider introducing the role of praiser and encourager into the next challenge to keep the participants focused on their role."*
> *(Entry 7, My G4 learning journal)*

The positive effects of using this form of communication was also supported by 26% of the G4 students reflecting in their end-of-unit survey that this is a specific skill they would use again outside of PE class.

Another successful intervention was using groups to perform written observations of other groups in action. They each had an observation sheet with some focusing questions on the process rather than task. They then had to present to the group their observations. This journal entry accurately discusses the success of the intervention –

> *"I was sceptical of the musings of 4th graders but was blown away by some of the thoughts of the students. They were really listening in to the conversations and were looking for active listening cues, body language, conflict, success, negative/positive communication. I think it also made the participants more responsive and engaged as they knew they were being critiqued. They still made their mistakes but all the teams were pretty much successful. Then during the debrief phase the observers got to report back to the groups and apart from several "I saw them communicating" most of the observations had merit and depth. Many of them picked up things I hadn't seen and addressed issues, such as safety. The teams took these noticings and particularly the wonderings to heart and had feedback in turn."*
> *(Entry 13, My G4 learning journal)*

The difference between the first G5 unit that had isolated lessons that focused on communication skills and the G4 unit, which had a direct focus on those same skills, was that the students were able

to transition between the planning, doing and reviewing phases a lot more smoothly. They were able to clear up differences and misunderstandings before they became larger problems. In this final reflection this student demonstrated this -

> *"I think I tested my communication skills in the Mission Impossible challenge, because I had to communicate with the people I might not know so well. That proves that I can communicate with other people. I also communicate nicely as I don't yell at people." (Lance, G4 Survey 2)*

4.3. The elusive art of facilitation

In this section define the precarious balance of pragmatism and genuine facilitation. It responds directly with my second research question, which asks;

> What are the most effective methods of facilitating adventure-based learning activities to enhance elementary students learning experiences?

Within an academic year we are required to cover a set number of strands through our PE program. The adventure challenge strand has a six-week block, which corresponds to 12 hours of lesson time. Within this finite 12-hour window, certain objectives needed to be met for each lesson and the overall unit yet there seemed to be a perpetual pressure to cut into reflection/facilitation time. The key findings were that this timing constraint was a persistent source of tension as it was difficult to judge how long each group needed for adequate challenge and reflection time. Another finding was that even after timing had been calculated external factors, such as scheduling, facilities/ equipment management and weather, additionally impacted what content could be covered. Internally, timing of the briefing/ experience/debriefing and reflection process varied considerably from group to group and class to class, thus impacting what each student was able to take from their experience. Overall the factors presented will reflect the dilemma Dewey (1938) proposed between finding the balance of student-led inquiry and the potential for free reign leading to mis-educative experiences.

I will be referring to 'We' a lot in this section as, in my context, I was part of a teaching team of another teacher and a teaching assistant. We were responsible for up to 44 students at one time so each of us helped plan and reflect on lessons and needed to facilitate and manage groups and the adventure challenges.

4.4.2. Timing

There is no set time length for an adventure challenge program. Panicucci et al. (2002) recommend for an elementary ABL program for Grade 3-5 needs at least 12 sessions to fully incorporate the appropriate sequencing and building of concepts. They did not articulate how long each of these lessons, but suggested that the content be covered depending on each schools allocation of time. There are no recommendations from the PYP stating how long an Adventure Challenge strand must be, just that it must be present.

For the G4's and G5's we had 6 weeks to complete the unit so by working backwards we had 12 sessions of 60 minutes each, totalling 12 hours per class or student. Covering the amount of concepts required to sequence effectively was already going to be a challenge but there were a number of extraneous factors that encroached into the overall learning time. The typical format would be briefing, including a metaphor, explanation of task and front-loading of the concepts. Then the challenges themselves took place. This would include a planning time for the groups to come up with ideas. Usually there were three challenges per lesson, though we did pare this back to two several times. Within this time we tried to allow at least 5-7 minutes per challenge to debrief the experiences that had occurred and then allow 15 minutes to self-reflect at the conclusion of the lesson. With this schedule it felt as though we were often pressed for time and that usually came at the expense of the debriefing time, which in turn influenced my ability to facilitate discussions. These frustrations are reflected in my journal,

> *"not quite enough time to finish each lesson even when activities are moving along, time just seems to dissipate". (Entry 7, My G5 Learning Journal)*

Even the students noticed it with one commenting in response to a "If you were the teacher what would you do?" question,

> *"I would focus on one thing for 2 lessons" (Koko G5 Survey 2)*

It would seem obvious that reducing the number of challenges would alleviate this but it was not this simple, as demonstrated in this extract,

"Even with only two activities, we still ran out of time to do the personal reflection so it was set for homework, so hopefully they can do it as they seem to be enjoying the tablet medium." (Entry 9, My G5 Learning Journal)

This time was stolen from a number of sources – students arriving late, computer tablets taking time to boot up, the length of the briefing, some groups taking longer than others, poor time-keeping, internet outages and some activities needing more differentiation than others.

4.4.3. Logistics, flexibility and safety

Oftentimes forces outside our control would influence the content or pace of the lesson. Rain caused us to modify plans and schedules clashed with other classes sharing the same learning space. This extract reflects these repercussions-

"This was the final lesson and we had put it after the final reflective piece due to weather constraint. This meant the students didn't get to reflect and record their own individual intra-personal feelings of self-efficacy, fear, courage, anxiety, that normally come with this exercise but it couldn't be helped." (Entry 17, My G4 learning journal

Many of the challenges are equipment-centric and this became problematic when the equipment was not available or damaged without our prior knowledge. Of course, this happens with regularity in a normal PE class but with such a large amount of set-up we learnt to have contingencies in place or be able to be flexible when responding to these changes, as illustrated in this journal extract,

"The create-a-challenge was a little ad hoc due to some last-minute facility changes and the two different classes went in completely different directions. The first was indoors and we let them use the mats. Many groups chose to create a Wall-replica idea and threw in an obstacle course or a scooter for good measure. This led to safety complications, though to their credit most of the teams got around this." (Entry 14, My G4 Learning Journal)

This journal entry also raised the issue of the tension between my role as a facilitator and as a teacher who was responsible for the physical, as well as emotional, safety of my students. In this case pragmatism prevailed and students were forcibly encouraged to abandon dangerous pursuits, yet part of me wanted them to see what might happen if they went for a slightly riskier option. In my

experience there does seem to be lower tolerance for risk in current PE teaching practice but it is a difficult compromise to reach.

4.4.4. Facilitating groups

With having over 40 students, another challenge was to try getting around and meaningfully facilitating with each group, let alone each student. With the assistant who supports the two teachers there is a rough 1:14 ratio. So with the group sizes being between 7 and 8 this meant we could essentially monitor two groups each at one time. As we had done in the past, we initially elected to stay on one challenge and monitor that one as each group came through. However, we soon found that we could not pick up the nuances of each groups dynamics and that we had no idea of what had occurred in previous challenges to take advantage of in a facilitation process. This is demonstrated by this journal comment -

> *"One thing I did find was that staying at one station means not getting deep enough with one group so would move around with them next time. It felt as though I was introducing activity over and over without really solving the problem" (Entry 7, My G5 learning Journal)*

After sticking with one or two groups through each of their challenges, we found

> *"This time staying with one group worked out really well as you could track the group development. Any problems that were unresolved from previous activities could be addressed at a later stage. I would continue with this technique for other challenges. That would also depend on the comfort level of the other two teachers and leading and briefing their own groups". (Entry 8, My G5 Learning Journal)*

We continued this on with the G4 unit with success but also realised that we ran the risk of missing some of the students or groups altogether so tried to ensure we went with different groups each lesson.

4.4.5. Briefing

A briefing discussion should include the learning objectives, the motivations behind them and the potential functional and dysfunctional behaviours that will help or hinder the chances of success (Gass

& Stevens, 2007). Often these main messages will be conveyed using some sort of metaphor, which is usually followed by the description and explanation of the challenge. Briefings should be brief and when they were not as well run as they should have been in my lessons there were knock-on effects. This was particularly the case when they were discussions about abstract concepts that the students had not yet experienced for themselves as articulated in this journal entry -

> *"We spent too much time in the briefing on talking about the meaning of trust and relationship between trust and empathy. This then took from away from other activity and reflection time." (Entry 4, My G5 Learning Journal)*

I also had issues with explaining the activities well enough for all of the students, particularly the EAL students, to understand what was expected of them. This meant the groups would then go off and do the challenges with the wrong instructions, leading to all sorts of problems. One of the counsellors stated -

> *"You identified the problem but need to be more specific at the start with the rules of the challenge. You said to cross the acid lake but didn't explain that you can't touch the lake or team goes back nor did you say planks couldn't touch acid. You told them this after the students moved from steps (where we briefed) to starting point. Would it been better to have been better to give the instructions at the steps where they could all hear?" (Critical Friend 1 observation)*

However, when the briefings were well-organised and structured, the students were appropriately front-loaded and were generally more prepared for what was ahead of them. This quote was an example of a 20-minute briefing that would generally be too long except for the purposes of this lesson, students needed to have an explicit understanding of the concepts before they could approach the challenge and meet its objectives. It also demonstrates the potential that reflexivity offers in changing learning objectives depending on situation and context.

> *Today's lesson was a classic example of heavy front-loading. After the conflict issues from last lesson, I investigated some ideas from Midura and Glover (2005) on using positive communication in adventure challenge. So we spent 20 minutes discussing what negative pressures you might see or hear and they were pretty responsive - They had seen, hair pulling, stomping, angry/sad face, storming off, crossed arms, turning away, being distracted and heard - sighs,*

groans, nasty comments, boastfulness, sarcasm, impatience, put-downs and were definitely more cognizant of this throughout the rest of the lesson." (Entry 10, My G4 Learning journal)

4.4.6. Debriefing

As this is an essential part of my research, it was an area of the unit that I wanted to get right. I discovered as the lessons progressed that the key was to plan for debriefing in advance and being prepared to stick to the time allotted. At the start of the study with the Grade 5 students, I seemed to not have the locus of control that I felt I needed and that I was either running out of time or not being in the right places at the right times. This led to a sense of frustration as I would get to the end of a lesson feeling as though I had just scratched the surface.

'The toxic waste exercise was successful but again we ran out of time to have a really meaningful debrief of what happened, which is the whole point of this unit!'. (Entry 6, My G5 learning journal)

As the lessons progressed I relaxed more and tried not to force the issue. I realised that with 44 students at a time, it was just not going to be tenable to always capture those moments of deep negotiation but that I also needed to try and streamline the debrief process, as observed below -

"I feel as though I nearly got into some good detail with two groups today but got drawn away from concluding the discussion, which felt like having to go home from a party early, pretty unsatisfying. It was for different reasons as well. Once because another group had got into some strife and the other we just straight ran out of time, again! I think I need either a quicker way to debrief or make more time somehow." (Entry 8, My G5 learning journal)

By the time I had got to the G4's some five months and some serious reflection time later, I had begun to note the differences required of a facilitator, as demonstrated in this extract -

'The true need for my facilitation I think comes predominantly in the debrief and moving around with groups to help eke out conversations and also providing opportunities for personal reflection and self-analysis. This is again a narrow window of opportunity in relation to the main part of the lesson so needs to be managed carefully. What we found was that when leaders can move around with a group they can observe and guide the conversations with

more depth than if they were seeing a new group each time.'(Entry 11, My G4 Learning Journal)

This also meant I could take advantage of those 'teachable moments' that might occur out of the set debrief time. Also I had begun to realise that there were other things I could control that could have positive effects on student learning and what attitudes and skills they might take away from an experience as this observation contends -

'What I surmise from this is that my lesson planning and structure had a lot of what can be potentially improve inter/intra personal skills. Of course my delivery is important but if I can set up the circumstances for them to learn then the opportunities should present themselves rather than me forcing them. The challenge of this approach is that one planned lesson for one class is different for another and the true teaching moments have to be enacted on fluidly. You can construct situations all you want but if the moment is not seized then it will all have been for naught.' (Entry 11, My G4 Learning Journal)

This posed many challenges as it was hard to predict where the discussions might head. Having routine prompt questions of the facilitation cycle of 'what, so what and now what' helped guide the interactions either toward the learning objectives of the lesson or toward another area which may have needed development.

In summary, there were a number of factors I had to consider and oftentimes react to. The timing of a 60-minute lesson was crucial in balancing enough action time with enough reflection time. External factor such as scheduling, facilities demand, inclement weather, and noise levels interrupted planned lesson objectives and had to be dealt with flexibility. Creating groups of about 7 or 8 students was the right number of participant but ensuring that one facilitator stayed with the same groups ensured continuity. The internal factors of briefing and debriefing were all within my control but took some time to get right as invariably briefing would go longer and debriefing would run out of time to be meaningful.

4.5. Know thyself

This section will address the difficulty I had in getting deeper into the facilitator role and then also knowing under what circumstances I needed to switch facilitative roles (Schwartz, 2005). Prior to this

thesis I thought I had been doing an acceptable job at facilitating but it on reflection I wonder if I had perhaps been glossing over the top a lot. It was a challenge not to revert to type and be the sports coach/ PE teacher that tried to move things along and stick to plans rather than allowing deeper reflection and be fine with letting lesson meander to create more meaning. There was also a number of times where I uncovered much deeper problems that some of the activities unearthed in my students that I didn't feel as though I was in a position to handle and was drifting more into the counselling/ adventure therapist role.

Although the PYP is an inquiry-based pedagogy and we try to ensure students are given agency over their learning, there are still times when, inadvertently or not, we limit our students freedom of ideas and expression. Some of the data pointed toward a lack of understanding of the teacher/ facilitator role in adventure challenge and also indicated that I sometimes stepped beyond the requirements of a facilitator. Trying not to put words into the mouths of students can be a challenge, particularly in group situations and feedback circles. Oftentimes saying very little said so much more. The responses from the students at the end of the unit as to what changes they would make to improve it were also telling. While there was a lot of positive feedback, the areas that needed work confirmed the findings that I have come to. I will now discuss the difficulty in fitting into a facilitative role before addressing the part student voice has in facilitating experiences.

4.5.1. Role of facilitator

A facilitator is commonly defined as a substantively neutral person who manages the group process in order to help groups achieve identified goals or purposes (Thomas, 2010). One of the most important tasks an adventure challenge leader needs to do before getting involved in any experiential learning process with their students is to define their role as a facilitator (Thomas, 2011). This was a difficulty for me as throughout the course of the unit, I had so many other roles to play. I was classroom PE teacher, teacher leader (of my co-teacher and teaching assistant), researcher, adult, and for some children, therapeutic counsellor. Though I did as Gass and Stevens (2005) suggest, and clarify my role as a facilitator with the students, I did not initially take the opportunity to reflect on what this meant for me.

Schwarz (2002) contends that to be an effective facilitator I should be prepared to change my role depending on the needs of the students. I recorded these thoughts after a moment of frustration.

"I can appreciate Schwartz's (2002) leader-facilitator role and Thomas's (2010) view on the difficulties this poses for facilitating in a teaching role. I have definite objectives for the lesson and overall unit and specific timings that I have to adhere to and this is often, if not in conflict, then sometimes not flexible enough to pursue the depth of facilitation I think I am wanting. Class size also plays a factor. It is a dichotomy that poses some interesting challenges". (Entry 7, My G5 learning journal)

Ringer (1999) asserts that it is the leader-facilitators responsibility to ensure there is a climate that supports each group in achieving their task and that this can be done by being attentive to the group and individual needs and by being 'present'. This was initially difficult as the numbers seemed too large and time too short to be truly 'present'. Throughout the course of the study though, I feel as though my role did change because as Thomas (2011) suggests, I became more responsive to the students by becoming more self-aware, or more person-centred. As I relaxed about trying to be on the spot to catch any source of tension so that I could intervene and began to concentrate more on a fewer number of groups, I was then more effective at being able to guide a group through whatever stage they were at. It may have been that my situational management had improved or that I was more involved in choreographing person-centred learning opportunities.

4.5.2. Getting Deeper

A struggle I had early on was moving student's discussions towards being about the process rather than the task or product (Gass & Stevens, 2005). They would invariably discuss the challenge in terms of perceived success or failure, even though we had gone to pains to remove any competitive element from the activities. This response illustrates the mindset of many of the students,

"Something I think I need to work on about myself is I'm a little bit too competitive so I need to be less competitive and I always want to do everything. And why? Because a like to win, and I love to be on attack more than anything" (Greg, G5 Reflection journal)

It was difficult to get them talking about the behaviours that were central to their efforts. The students were more concerned about the descriptive side of the challenge than the motives behind it. I would generally ask them to talk about what happened and what they might do to improve the next

time. I initially used Priest and Gass's (2005) funnelling approach, which breaks down the facilitative questioning process into 6 filters, but it seemed too prescriptive. Quite often I would get to the third filter, where we had to ask about the affect and effect that addresses the emotions and their causes, and the conversation would diminish. This frustration was demonstrated in this journal extract,

> *'For my debrief technique I again went with the strengths, things to work on approach. It was effective and I think it might be the right level for this grade. Using the funnel has not been that successful as I feel as though I have not really seen enough emotion to ask how people feel. I think I need to arm myself with specific questions to ask for specific challenges'. (Entry 8, My G5 learning Journal)*

Another struggle was being unaware of the right facilitator role to play at what time or when it was good to switch roles. A moment of professional-learning clarity occurred during one of the critical friend observations where one of the observers, who was a school counsellor, stepped in to assist with a situation. In our debrief meeting later, she apologised for interposing but I told her that I had learned more from that intervention than I had from several books worth of reading. This is reflected in my learning journal -

> *"The way Gaby handled a group today was amazing. A predominantly strong female group 'elected' to leave the two boys behind in a cross-the-river type of challenge, stating that they would go back and get them later. As they had chosen to do this 'democratically', I let them forge ahead and then went to assist with other groups who had not even come up with an idea. The challenge was a difficult one and it was taking the group a long time to get across but they were working cooperatively so again I concentrated on the groups who were 'struggling'. Gaby then went across to the group and asked them the simple question, "how do you think that makes the boys feel?" The discussion afterwards was gently handled, as the boys, who were quite shy, eventually got across that they were not happy having to stay behind. After seeing the effects their decision had had on the rest of the group, the girls sacrificed the progress they had made to start over and were eventually successful in the challenge." (Entry 9, G5 learning journal)*

I had been content to wait for them to get to the end of the challenge for the same conversation but by then the review opportunity would have been purely punitive and the group would have missed a restorative process. Mediating in the middle of an activity, or as Schön (1983) refers to it - 'reflection-

in-action'- had not been in my thought process at that stage. The way she gently probed about everyone's feelings was not a technique I had seen and helped me in my subsequent lessons.

4.5.3. In too deep

There were a few situations where I was uncomfortable with the role I was playing and had drifted from the facilitator-coach role into the facilitator- therapist (Schwarz, 2005; Gath, 2009). It was when one student bought up feelings of wanting to hurt someone and another situation where a student was having a family problem. Without going into too much detail of the situations, this is synopsis of my feelings at the time.

> *"I initially just told them to get on with the task-at-hand……I was in uncharted waters….it goes to show you how important it is to know your students". (Entry 12, My G4 learning journal)*

As Rohnke (1988) contends, "most leader's concerns about debriefing probably relate to fears about managing intrapersonal issues. There is a fear of the unknown, of opening up an issue that is too painful to deal with or that the leader feels incapable of managing safely and appropriately" (p. 54).

Of course there was conflict, tension, frustration and turbulent group dynamics, but I do not think it would a successful adventure challenge unit if these factors were not present. However, for both of these challenges I was unprepared as to what to do. In the end my natural teacher instinct took over and I offered what support I could by resolving one of the problems and referring the other one to the school counsellor. This might not be a luxury at other schools so developing protocols for dealing with situations outside our remit would be a move for next time.

4.5.4. Bringing back student voice

Having taught adventure challenge units as a part of a PYP PE program for 8 years, I would say that I had thought that I was relatively certain that as an experiential educator, I was responsive to student voice, as it is a major focus of the curriculum model. As it turns out however, though I was striving to be student-centred, in reality I had become, as Estes (2004) contends, much more teacher-centric. This example reflects the notion that I was influencing the student's ideas, even though I had no intention of doing so -

"One student called me out today when I told her group to tell the rest of the class how they had solved the toxic waste transfer problem. She responded that this was how I had told them to do it. She wasn't accusatory but she was clear that she had not had the agency that she felt her or her group deserved". (Entry 12, My G4 Learning journal)

Using the time-honoured technique of paraphrasing was also robbing my students of giving the responses the validity they deserved (Brown, 2004). One response from the end-of the unit, recommending what they would do if they were the teacher, was particularly telling -

"I will (would) listen to the kids every time" (Florence, G5 survey 2)

I felt a connection with McKinney's reflections on her use of experiential activities, as she describes her realisation that she could no longer facilitate activities that were designed to teach participants lessons by tricking them into certain behaviours with the "hope that they would have an 'aha!' experience in learning (McKinney & Beane, 2005, p. 488). This refers again to the providing of what educators perceive as opportunities for learning, which in reality is a simply a form of social engineering or manipulation (Brown 2002b). Two examples point out the futility that students felt surrounding two different challenges -

"I wonder… Why we had to cross a river full of piranhas by a rope. It seems pointless because it does not help us that much with teamwork or anything." (Tracey, G5 Learning Journal)

"One of the conversations I facilitated was about how important it was to have tension and frustration as that is when you learn more about each other's strengths and weaknesses and that very few groups had achieved the challenge so not to worry about it too much. Ellie asked what the point of having a challenge that was designed to fail and that was unfair as it had caused undue stress. Fair comment." (Entry, 11, My G4 Learning Journal)

4.5.5. Learning from Students

When initially interviewing the Grade 5 students I found I was unsuccessful at getting them to explain how I could improve my facilitation skills. This was likely due to the power relationship I had as a teacher in those intimate interview situations or because the concept may have been too abstract for them. In response I included the question, 'If you were the teacher, what would you do differently in

this unit?" in the end-of-unit-survey for both G4 and G5. This adaption provided a number of interesting responses -

If you were the teacher, what would you do differently in this unit?	
I wouldn't tell my students the answer instead I should give them ideas and encourage them.	If I were the teacher, I might have many groups in separate spaces, doing the same activity, but thinking that they were doing different activities so they wouldn't try to copy other groups. Then, I would have each group record thoughts and strategies, and later on, the groups would learn that they did the same activity, then would share what they did, the pros, the cons, and some comments from the other groups
I wish there more challenging activities and me and my group gets the feeling of trust and stress that would actually make it more fun in the end and reflect	I would provide as much support and understanding as possible.
Give the groups more time when there doing challenges	I will listen to the kids every time
Less dangerous challenges.	Not really, but I would let the student choose their groups
Less groups so it will go faster	I would make the challenge more harder because people is going to have more ideas
I maybe will gonna do the balances or timings (good at timing when to go).	Give the groups more time when there doing challenges

Table 9. G5 survey responses

Even though there are contradictions, these responses illustrate that students are aware of the best learning conditions for them to make meaning from their experiences. The implications of this sort of reflection are that student's perceptions of the learning objectives and criteria are often a telling judgement of success than more formal assessment methods. I used many of these ideas from the G5 unit in preparation for the G4 unit and have maintained this self-reflective practice in other units.

4.6 Know your students

In this section, I want to paint a picture of the wide range of students and their individual needs that are present in an international PE setting and how these become magnified during adventure-based learning. It responds with the latter part of my second research question, which asks;

> "What are the most effective methods of facilitating adventure-based learning activities to enhance elementary students learning experiences?"

With the diaspora of cultures and learning needs represented in each PE class I found that differentiation

4.6.1 – Differentiation

Adventure Challenge should be a fun yet rewarding experience. When there is a wide range of ability, maturity and comprehension, however, there can be an increased chance that learning might be diminished for some students. One group who felt marginalised by the amount of communication required was the English as an Additional Language (EAL) students. They could participate in the action phase of the challenge but could only contribute partially to group discussions as demonstrated by this observation -

> *"I was surprised by the clarity of many of the answers, though again the EAL kids really struggle with the complexity required to answer many of the questions. I think they understood them but could not voice their true feelings, which would have been frustrating". (Entry 5, My G4 learning journal)*

I tried to get around this by offering them opportunities to draw pictures in their reflection journals or to talk with friends in their home language but, particularly in the case of the G4 unit concentrating

on communication, there needs to be more effort in finding strategies to help them. Perhaps in a commitment to student voice and agency, asking them to identify what would help them to better express themselves would be more beneficial. Other times that group struggled were when different cultures reacted in ways that other cultures found strange. This happened at a subtle level because our students are surrounded by an international array of classmates and are used to the ongoing negotiation that this requires.

4.6.2 - Connecting through other facilitative methods

When preparing the G5 learning journal, much effort had been put into ensuring that the reflection tasks were varied, sequenced in terms of complexity, interactive and probing. There were opportunities to engage with partners, triads or reflect individually using an array of tools such as continuums, pictorial questions, photo shoots, open-ended questions, and other visible thinking tools. This was age-appropriate and the students enjoyed using the journals. After the G5 unit, 75% of the students thought the journal was useful and answered to the question 'Did the reflection journal help or not, and how?",

- Yes, to be more reflective and truthful.
- Yes, and this reflection journal helped me to think more bigger.
- Yes because it was fun writing about your feelings and what you did.
- It helped me see my strength and weaknesses. (G5 survey 2 responses)

When we were planning for the G4 unit, I took into account the time required for students to complete the learning journal and the computer skill that would have been necessary and made the decision that they were not ready. However, in the process of this deduction of the digital format, I forgot the successes of the journal and that experiential learning is based on learners being active, curious and creative (Kolb, 1984). As a result, the G4 unit was circle-time –heavy. While the motives were correct, so that students would improve at the communication skills, it left the debriefing process because as Greenaway (2004) states 'It is not enough to expect that the stimulation of the activity will keep students alert and involved during a dull review in which the facilitator runs through a series of questions' (p. 1). By catering to the 'potential' technology problems of the whole class I had instantly made it more difficult for EAL and introverted learners to engage in the lessons.

The results of the two rounds of data collection and analysis yielded some interesting findings. Using students and my own reflections I was able to discover how attitudes and skills were affected by the challenges and my facilitation of them. After the G5 unit, it became strikingly clear that communication skills would help many students and their groups be able to take more from their experiences and that lead to the planning for the G4 unit. The last three themes looked at the part the teacher could play in becoming a more effective facilitator. The demands of internal and external pressures on reflection time proved difficult at the outset of the study. Learning to prepare and adapt helped negotiate the changing role of the facilitator. Lastly, the wide range of student needs became evident in a number of different ways and required a deeper understanding of what was the optimal learning environment for them

Chapter 5 Discussion and Recommendations

The major problem that prompted me to investigate the facilitation of adventure education was that I wanted to know how to elevate a lesson from a fun activity to a meaningful experience for my students. I also wanted to know what the effects of these experiences were and whether they manifested themselves in the form of changed intra-personal attitudes or inter-personal skills. Having delved into this complex topic, I have gained insights from diverse perspectives and have reached the conclusion that the facilitation of meaningful adventure-based learning is dependent on a number of factors. In this chapter I explore these factors and offer some recommendations for other practitioners looking to improve the facilitation of their adventure challenge lessons. I will do this using a running narrative to illustrate how these factors might look in a model class.

5.1. Narrative Picture

Using Dewey's constructivist philosophies I will now interlace what I discovered in my findings with a fictional narrative that illustrates some of the scenarios I have encountered at various times of my research and tie them into a single lesson. In the narrative I show myself as I would like to be as a facilitator because this also demonstrates my learning through this research. The objective of this format is to provide a structure for this discussion chapter. Through this lesson framework I offer a snapshot of facilitation-in-action. During each stage of the lesson I will refer to the literature and my results to provide background depth.

5.2.1. Focusing on the interpersonal

Context

This is the third lesson of 12 in a Grade 4 adventure challenge unit. The central idea of the unit has recently changed from focusing on an intrapersonal focus of "Being confident in your ideas can help to solve problems more effectively" to a more interpersonal focus of "There are many different ways of communicating that help us to solve problems together". There will be 40 students in six groups and I will lead teach alongside one other teacher and one teacher aid.

Using Cosgriff's (2000), definition of Adventure Based Learning (ABL) as being 'the deliberate use of sequenced activities for personal and social development of participants' (p. 90), it is possible to demonstrate the importance of intra-personal attitudes and inter-personal skills when teaching adventure education. Many research studies on the outcomes of adventure education point to the positive effects on participants and facilitator experiences (Amy & Alan, 2010; Ewert & Sibthorp, 2009; Goldenberg, McAvoy, & Klenosky, 2005; Hattie et al., 1997; Neill, 2003; Shellman & Ewert, 2010). However, Rickinson (2004) cautions that there is considerable variation between different types of programs and different types of outcomes.

Of these potential outcomes, Hattie et al. (1997) found that they could be sorted into six major categories, with interpersonal skills (such as cooperation, communication, social competence, behaviour, relating skills and recidivism) and intrapersonal attitudes (such as independence, confidence, maturity and self-understanding) forming two of those important categories. Both interpersonal and intrapersonal categories had moderate effect sizes, with some outcomes such as independence , cooperation and social competence, having strong effect sizes. In my study I found that the interpersonal skills changed more than the intrapersonal attitudes, and were more pronounced. This was corroborated by Sibthorp et al. (2015), who when studying the effects of an outdoor learning experience, concluded that "although there were increases in engaging experiences there was still no conclusive support that OE can and does lead to intrapersonal attitude shifts" (p. 13).

It is important to point out my findings, as supported by the above research, suggest that intra-personal attitudes are still positively affected throughout the course of this study. Many students reported improved levels of self-confidence, empathy, self-awareness and commitment but these often arose spontaneously because intrapersonal attitudes were not the focus of the lesson and occurred more in reaction to a situation they had experienced. For example, during a blindfold activity where the learning objective concentrated on trust between partners, one student commented that they felt they grew more confident in their own abilities as,

> *"My partner was not very good at giving directions so I believed in myself to get through the minefield on my own" (Stephanie's G5 Learning Journal)*

This change from concentrating on improving intrapersonal attitudes to working on interpersonal skills was an important shift for this study. I discovered that measuring any changes in intra-personal attitudes is very difficult as each individual reacts to situations in different ways, as evidenced by the diverse feedback from all of the students who participated in this study. More importantly, this also makes it difficult to plan for such learning to take place, particularly in the large class sizes in my teaching context and in other PE classes around the world (Erickson & Kulinna, 2012). Rink (2009) questioned whether affective (social, feeling) and cognitive (thinking) outcomes are even understood by students during PE Units.

Even with a focus on interpersonal skills, Rink argued that physical educators often presume that activities such as team sports will automatically result in cooperation and teamwork. However, Schwamberger (2009) found that these affective and cognitive skills need to be taught explicitly and clearly. From their work with cooperative learning in elementary schools, Dyson (2002; 2003) found "Our experience has taught us that merely placing students in groups does not automatically result in cooperation, therefore students need to be taught social skills" (2003, p. 3). This literature shows a trend towards focusing on interpersonal skills in education and this was also true for this study, a switch in focus from the intrapersonal to the interpersonal therefore allows for more defined learning outcomes.

Interpersonal skills (eg. problem-solving, decision-making etc) are processes that can be planned for and instructed in a discrete sequence (Bisson, 1999). Armed with these skills, students are more able to take on challenges and are more open to improve their intrapersonal attitudes accordingly (C. Hammersley, 1992). Goldenberg et al. (2005) found that developing relationships with others and working as a team emerged as one of the most commonly mentioned consequences (63%) of their 216 outward-bound participants. This adds to the debate, raised by Tinning (2000), concerning the balance in PE programmes between learning physical skills and social skills. Without learning these social skills, either before or during lessons, the experiences have the potential to become what Dewey would consider 'mis-educative experiences' (1938, p. 5). This mis-education might take the form of students being given too much free reign, such as in the Create-a-Challenge activity in G5, where students invented unsafe activities to test their classmates (Entry 13, My G5 Learning Journal). In this regard, the facilitator must be watchful for opportunities to engage students in positive inter-

personal skills that can then be transferred out of the PE class into their lives out of school, thus creating the 'educative experience' Dewey strived for.

5.2.2. Planning for learning experiences

In preparing for the lesson I address the learning objective for the lesson, which is "We will understand that 'active listening' involves giving your full attention to the speaker and asking clarifying questions". This is designed to build on the non-verbal communication lesson they had completed earlier in the week and lead into positive communication for the next lesson. Over the one hour lesson, I decide there will be three challenges; The Wall, The Space Needle and the Electric Fence.

After briefing the students (5 minutes), two groups will start on one station and then rotate around through the challenges after a set amount of time (12 minutes). There will be a group discussion after each challenge (3 minutes), a whole-class debrief at the end (5 minutes) and a self-reflection in students learning journal at the end (5 minutes). One teacher will stay with two groups as they move from station to station. They will facilitate the group discussions and have planned potential facilitative questions in advance to prompt or provoke discourse.

Facilitating meaningful experiences for participants is a difficult process that requires a great deal of preparation, timing, patience and pragmatism within current constrained limits. Brown (2006) acknowledges "the use of adventure education pedagogy (pedagogy employing the experiential approach) in 'short' or 'lesson-space' periods of time is not without its difficulties" (p. 687). Prouty et al. (2007) also reflect this stating, "Scheduling reflection time is often a challenge since the length of time for clients to complete the challenge is unpredictable" (p. 108). Dyson and Sutherland (2014), too, recognise the obvious tension in PE related to the time allocation of activity time versus reflection time but urge teachers to plan for adequate debrief time.

Initially, planning for the lessons in detail offers one of the best ways to try to provide viable opportunities for students to be able to take away learning from their experiences (Gass & Stevens, 2007). This involves sequencing the units and lessons in a developmental progression (Bisson, 1997), structuring each activity to allow enough time for briefing and debriefing (Panicucci et al., 2002) and

preparing guiding and reflective questions to promote the facilitative process (Roger Greenaway, 2004). There are many aspects that need to be considered throughout this planning stage.

There are also several logistical and organisational challenges that can inhibit the process such as space, resource and time constraints (Cosgriff, 2000; Schwamberger, 2009). These are common in a PE teacher's world (Martin & Wagstaff, 2012) and again can be countered in advance through effective planning but are more likely to need to be dealt with a degree of flexibility and creativity as they arise unexpectedly. An example of this from my research was when, when weather affected the order of reflection during the G4 unit and resulted in students needing to reflect on the challenge for homework, an approach I had not considered up until that point.

I discovered that it was not possible to catch every teachable moment with such large class sizes and short lesson times. Rather than remaining on one station, I found that by staying with one group through all of the challenges I was more likely to be able to notice changes in team dynamics or spot moments of individual tension and act upon them. This in turn created its own dilemma as I did not see some groups for long periods and had an overall effect on my ability to facilitate the inter-personal skills of each student in my class.

5.2.3 – Understanding student needs

When grouping the students, I use my prior knowledge of the students in class to try and have a mix of cultures, genders, English capability, obviously introverted/ extraverted and learning-assistance-requiring students. I know that these different learning needs affect how the students will interact with each other and how they might impact on theirs or others experiences. I have also spoken with class-teachers prior to the unit starting and got red-flag warnings about two of the students who are currently having social-emotional problems.

From my experiences and the results I discovered that student differences can be exposed because interactions are generally deeper in an ABL situation so it is therefore important to know your students and understand how to help them work to the best of their ability (Tripp, Rizzo, & Webbert, 2007). Suomi et al. (2003) comment on the wide range of needs in a PE class stating,

"By their nature, educational environments are multifaceted and complex. Clearly, the environment becomes even more complex as students with disparate motor, intellectual, cultural, linguistical and social abilities are educated in the same gymnasium" (Suomi et al., 2003)

Using the adventure curricular model (Cosgriff, 2000), PE teachers are able to form relationships with their 'clients', and are more readily able to then assess their needs prior to the experience occurring. For example, when allocating two of the groups in the G4 we put two new students together without knowing their backgrounds and from the very first lesson they clashed intensely, to the detriment of the team dynamic. Another example was knowing a new student with no English was from an eastern European, country we were able to place him in a group with another student from the same country to assist in his transition. Sutherland et al. (2014) concurred with these findings, concluding that within ABL, knowledge of the students is related to understanding the interpersonal and intrapersonal dynamics of each student and how they combine within the group setting.

The breadth and depth of differentiation required is heightened in an international PE class. Within the context of this study, there were 22 different cultures represented with only 29% of the students having English as their first language. Most classrooms in the world are becoming more diverse and global and Marshall (2012) suggests that being "different" in the international school setting has become the new normal. Therefore, when planning the physical educator must be prepared to face some cultural barriers, especially religious and societal attitudes that may hinder some students from participating to their full potential in physical education (Hardman, 2009). They must also be keenly aware of cultural differences when communicating with students. For instance, contrary to Western norms, students from some Asian cultures will not look a teacher in the eye while the teacher is speaking to them (Erickson & Kulinna, 2012). My experiences in this area lead me, for example, to consider how I use some hand signals and gestures, which can be highly offensive in some cultures.

With English being an additional language to most of the students, making communication a focus for the G4's was important but had its inherent challenges. Generally speaking, the deeper the reflections get during debriefing the more understanding can be drawn from an experience (Gass, 1993), which is one reason why there was a greater focus on communication during debriefing in the second unit in the study. However, as discovered by Suomi et al. (2003), it was observed that the more we encouraged participants to speak their views, the more frustrated and isolated some of the EAL

students became as they could not articulate their thoughts as clearly as they wished to. Some of these students withdrew into cultural cliques and the comfort zone that these offered. Others, who may not have had similar native language-speakers to connect with, could often only explain surface interpretations. This is not to say that they did not take anything away from their experiences, it was just that they could not communicate their thoughts as effectively. For future ABL experiences, asking students themselves how they would prefer to communicate their ideas might at least give them some ownership of their level of engagement.

Other students have different social and emotional needs that being prepared for would have helped develop an appropriate response or type of differentiation strategy for. A good example was the students who were either very introverted or extroverted and the implications this had on team dynamics. Cain (2012) states,

> *"Introverts like to work autonomously, but the trend in education over the past twenty years has been focused on group learning. To an introvert, the experience of always having to learn in a group can be anywhere from annoying to even painful." (p. 128)*

When students were asked to categorise themselves according to Honey's Team roles (2001) the introverted children usually considered themselves to be 'Thinkers' who are people who generally produce carefully considered ideas and weigh up and improves ideas from others. It was found that groups that were heavy on students from either end of the spectrum did not function as well. This is echoed by Cain (2012) who contends,

> *"It is important to remember that groups function best when there's a mix of personalities. In the company of introverts, extroverts feel permission to be themselves and to talk more deeply, while introverts find that extroverts bring them into a more carefree and light-hearted zone." (p. 145)*

From the narrative, by liaising with the classroom teacher about any socio-emotional concerns my students had, I was also able to prepare myself for a range of potential situations. This is supported by key findings from Ramirez, Steffen, and Jin's (2014) study of the challenges of introducing adventure-based learning into the PE classroom, where they deduced that physical educators should consider all students' needs and should not neglect socio-emotional aspects within PE. Ultimately, it was found

that knowing your students can help a teacher or facilitator, to plan for more individual opportunities for them to engage with their experiences. For example, not knowing about the student with concerns from home, I was unprepared for how to react when they broke down. Had I been more informed I would have been more sensitive to their situation, and been able to subtly guide others in their group to be more so as well.

5.2.4. Communication is key

Briefing

I have decided to use the metaphor of how one would really listen to a favourite song to introduce the learning objectives of 'active listening'. The students think of the important things required to listening to a song and then share their thoughts with their neighbour. They are all then offered to share with the class.

A protocol to follow when communicating with each other in group discussion is drafted and then agreed upon. Some of the protocols include giving full attention, maintaining eye contact, and using clarifying questions as feedback.

According to the overwhelming comments of the students in this study and my own personal sentiments, one of the most important interpersonal skills to teach to elementary students is that of communication. Throughout the whole problem-solving process students wished to be heard and the largest sources of tension and dissatisfaction occurred when they felt they were not being listened to. Dyson (2002) too found that the ability to communicate effectively with peers is problematic for many younger students. Once students were encouraged to be clearer in all forms of communication they were able to solve problems with less tension. Based on the first iteration of the study several interventions were created for groups to follow when communicating with each other. These were shared with the students in the second round of data collection and the student reflections indicated that these steps to improve communication were useful. Hattie et al. (2007) reinforce this in one of their findings -

> *"In our meta-analysis, across all interpersonal dimensions, there are marked increases as a consequence of the adventure programs. This is particularly noted*

> *with social competence, cooperation, and interpersonal communication (bold added). It certainly appears that adventure programs affect the social skills of participants in desirable ways (1997, p. 69)*

Writing for the IB, Hedges et al. (2012) list collaboration and communication as two of the seven Approaches to Learning that should be taught under the IB curriculum model. They contend that students need to learn these skills to, in turn, be able to learn. Fitzpatrick (2005) found that within PE classes interpersonal communication skills were highly valued by students who considered them useful in different aspects of their lives, including their relationships with others. They cautioned, however, that sometimes cultural barriers prevented students from using these communication skills outside the class setting. I have observed this also occasionally happening in cultural cliques in the international education setting.

I devised some of the interventions to enhance two-way communication in response to the first round of data collection. Priest and Gass (2005) found that effective two-way communication is an involved process that starts with the sender generating, encoding, linking and sending a piece of information to the receiver who must first decode, interpret and then make changes before returning feedback on the quality of the message. As if this were not difficult enough, various sources of noise affect each stage of the transmission. The *semantic noise*, such as technical jargon, occurs during the encoding/decoding phases and can be managed by ensuring students question and explain these terms throughout the transmission. The *internal noise*, such as mental blocks or EAL difficulties, occurs during the linking and interpreting phases, and can be managed by encouraging students to be patient and adhering to their Full Value Contract. *External noise* is the environmental conditions that are present that remove focus on the message, such as loud class discussion or neighbouring gym activity. In a PE setting this can usually only be diminished, rather than be mitigated, though improved feedback will help clarify what may have been missed. The interventions that were the most successful in enabling this two-way communication were using active listening and clarifying questions. This was demonstrated in the G4 end of unit survey, with 70% and 55% respectively of students reporting that they found these skills the most useful in the unit and what was more telling was that 55% and 44% felt they would use them outside of PE.

5.2.5. The role of the facilitator

Challenge Activities

Two groups are starting on "The Wall", whereby each team must safely get all of its members over a 2m high crash mat without the mat falling over. The group sits in a circle and passes a stuffed monkey that they can hold if they would like to share their idea. I remind them that they are to actively listen to each person as they speak. I sit on the outside of one of the circles and listen as they take turns sharing. One of the normally quite shy boys starts to share but is interrupted by a more vocal girl and then passes the monkey on. The group settles on an idea on start to jump and haul one another over.

One heavier student has helped many of the other students over but is afraid of going over himself. The boy tries to climb over himself but he cannot get up and the boy gets visibly upset so I take him aside to talk to him. The boy says he hates being fat so I discuss with him about how being big and strong can be an advantage and an asset to the team. I then get the group together and suggest they come up with a different plan but when one new-to-English boy tries to explain his idea, his group do not understand him and he starts to get frustrated and verbally lash out. I quickly recognise this boy as the one referred to me by the counsellor as having anger-management issues and I step in early to calm the situation and ask the boy to explain his idea to him and he in turn rearticulates to the group. The group uses his idea to push as a team and are successful in the challenge. Even though this means there won't be time for the next challenge, I extend the debriefing time to delve deeper into what the group had experienced.

In the group discussion that follows I ask questions about what happened, and then prompt the groups to go deeper. I query whether everyone felt they had their ideas heard, in particular the introverted boy. I then ask how it made him feel when he had not been able to share. What would the group do differently next time? I allow the students to ask each other questions, in accordance with the learning objectives, and do not paraphrase their responses but ask them to clarify their idea if it seems as though the group does not understand.

> *"The role of the facilitator offers an opportunity to dance with life on the edge of the sword, to be present and aware, to be with and for people in a way that cuts through to what enhances and facilitates life" (Hunter, Bailey, & Taylor, 1994)*

In this narrative I demonstrate the necessity of a facilitator to know themselves, their role and how to be present and take advantage of teachable moments when they arise. From the results of this study, it became evident that as well as being prepared, a facilitator needs to be responsive to situations as they present themselves. In my reflection journal I noted the difficulties in defining my role as the lines were blurred from teacher, therapist, leader, instructor and coach. In some situations I felt I was out of my depth, for example, when dealing with students who brought emotional issues from outside of PE or in other situations I was too much of an instructor trying to push students through activities to meet a schedule. Schwarz (2002) outlines five roles and maintains the complete facilitator is able to move between roles depending on the needs of the client. These roles are contingent upon the objectives and parameters of the challenge. To know how and when to switch roles, the facilitators must first know themselves. That is, to know the values and beliefs that shape their responses and how they engage with the content and processes they are negotiating with their students (Thomas, 2010). I tended to move between roles, with that transition at the start being probably more reactive than planned and with more fluidity towards the latter stages of the study.

Similar to others (Thomas, 2008), I found that cultivating both my intuition and my intentionality were important steps in my development as a facilitator. Hogan (2002) describes facilitation as an art, science, craft and profession, and maintains that many elements of facilitation may be intuitive. Much of what teachers and others do, in the heat of the moment, is not premeditated; it is perceptive or innate. A situation arises; the teacher reacts, and only later, if at all will she or he pause to “figure out” what was going on, and why they did what they did (Claxton, 2000, p. 2). Hunter et al. (1994) acknowledge that ”being connective with and using your intuition is essential as a facilitator” (p. 76) and that facilitators need to act in the moment without the luxury of time to think or reflect rationally. Developing intuition takes time and it took me until half-way through my second round of data collection before I felt comfortable letting opportunities arise rather than forcing them.

Initially I found that I was often at a loss as how to prompt individuals and groups to get deeper or to ‘say the right thing’. After one lesson a critical friend observer offered some simple advice, “Just ask them how they feel’ but during the tension of the task I sometimes felt like I was unable to guide the students in the way I had wanted to at the start of the lesson. I often drifted into what Schwarz (2002) would consider a facilitative leader, because as a teacher of young students I felt I often had to coax, drag or push students towards certain directions, thus losing my neutral role required during

facilitation. Attaining neutrality is notably elusive, with Hunter (1994) suggesting that teachers find it even harder as they are invested in the content and also have a supervisory role to maintain. As I knew the learning objectives of each lesson, I had thought I was being intentional in my facilitation. I had used what Argyris (1985) would describe as 'espoused theory', which is how a facilitator says he or she would act in a given situation. However, in contrast, I had actually used 'theory-in-use', and this has a "powerful effect on the facilitator because theory-in-use operates quickly, effortlessly, and outside his or her level of awareness" (Thomas, 2008, p. 6). Hovelynck (2000) explains that when facilitators find themselves in an embarrassing or tough situation with a group it is not uncommon for them to activate just one theory-in-use to guide their behaviour and this often leads to ineffective facilitation as it is not a multi-level response.

To counter this I had to improve my intentionality and become more familiar with facilitative techniques such as Greenaway's (2004) reviewing model or Schoel, Prouty, and Radcliffe's (1988) funnelling method. Once I did this I was able to have more questions prepared and could guide my students more effectively. Luckner and Nadler (1997) argued that facilitators have a responsibility to develop both the knowledge and skills to facilitate participants' transfer of learning so that the "better we understand the factors that influence learning and the processes that underlie it, the better we can design experiences that will benefit individuals" (p. xvi).

In the narrative I present a facilitation style that balances intuition and intention. I do a good job of recognising when to step in and counsel an individual student and then turn it into a learning opportunity for him and the rest of his group. This action echoes how I tried to approach lessons towards the end of the study and derives from Schon (1983) theory of *reflection-in-action,* which he describes as the ability of practitioners to reflect on behavior as it happens. It urges a practitioner to use their professional intuition to take advantage of the 'teachable moments' as they present themselves. Hovelinck (2001) suggests that in adventure education this process takes place both during the activity and the debrief.

Towards the end of the study I found that by being more attentive to students and their group's needs and motivations I was able to encounter more of these moments than I was at the start of the first unit. This process occurs early on and continues throughout the experience with Ringer (1999) arguing that facilitators need to create a climate of trust and safety and then have an awareness of

interactions of individuals and groups before they are able to step in and help guide them. Hogan (2002) describes the importance of relationships and the need for facilitators to be *fully present* and authentic with group members. Sutherland et al (2014) found that the effective PE teachers they studied recognized the need to assess where their group was, in terms of working collectively, in order to know what to plan and when to progress through the ABL sequence.

This did create a dilemma because when staying with one group, although I became in tune with how they were working together, there was a persistent thought that I might be missing moments with other groups. It was also at odds with the perceived need to be pragmatic, as waiting for a moment to arise seemed like an impractical use of time. Efficiency can be dangerous in education because of the nature of teaching and learning- it requires time and is unpredictable.

5.2.6 – Effective reflection

Debrief and Reflection

The Wall challenge goes much longer than expected so after speaking with the other teachers, I decide to not do the third challenge and spend more time in groups debriefing the second one. When bought in there are cries of indignation from the students who want to complete the final challenge, so I suggest if there is time at the end of the unit, they will make it up. In the class group debrief I ask the students to think privately, then share with a neighbour what they had learned about themselves in the lesson. In sharing their thoughts with the class, some students said they had felt like risk-takers going over the wall, some said they liked helping others over the wall, and some said they were better listeners. As in the previous debriefing I did not paraphrase their answers but let them speak their minds, even if they thought they had not learned anything.

Using their reflection journal, students then had to draw a plant that represents how they communicated in the lesson and explain why. Some students asked if a teacher could help them explain their drawings. The heavier student draws a smiling sunflower and explains that it was the happiest day for him as he made it over the wall thanks to his team's effort.

The second part of Schön's (1983) work on the reflective practitioner was how to promote *reflection-on-action*. Hovelinck (2001) directly relates this to the facilitation of the debriefing stage of

adventure-based learning and how to best help students to process their experiences. In the narrative I use this debriefing time to bring the students in to gather and share their thoughts and then internalise them using their reflection journal.

I found that a move away from an over-reliance on circle-talk was important in allowing students to process. This is supported by research from Brown (2004) who found that facilitators can often use circle-time to accept, reject or modify student contributions. Brown (2002a) also argues that the physical structuring of sitting in a circle, and the pre-allocation of student turns at speaking, creates a formal turn-taking system where there are limited options for students to make contributions that fall outside of the topic determined by the leader. In the study I sometimes fell into the trap of trying to paraphrase students voices thus denying them the agency of their own thoughts.

Alternatively, to show students we have truly listened to them, facilitators need to be able to repeat what they have said so this can create a tension. In my journal I reflected that I needed to be more responsive to what students actually say and have an awareness of how I paraphrase. Supporting this, Estes (2004) contends that,

> *"By experiential educators assuming power over students by over-controlling their reflection on experience, they devalue both the experience and the students' role in their own learning. The resultant effect is that learning experiences are only a shadow of what they can be"(p. 151)*

Estes goes on to suggest that practitioners need to become more student- centred rather than continuing the current teacher-centric model when facilitating.

Some of the methods that produced the most interesting reflections were the student's learning journals, student surveys and the student's observations of one another. The learning journal allowed all of the student's adequate time to process their experiences with a guiding platform and probing questions. It proved to be more accessible to the students, particularly the EAL learners, and the depth of answer was more revealing than those that occurred in the more rushed and sometimes staid circle-talk. It also offered more varied options to reflect such as video, audio and sculpture, which the students were more inclined to open up to. Students were bluntly honest about each other's actions when observing other group's problem-solving performances. Through this process of

externalising they were then able to reflect on their own efforts more honestly. By the time of the final round of data collection, the student survey questions had been refined to garner far deeper responses than had been recorded in the first iteration.

I found that that I had initially put too much pressure on my own verbal faciltiation skills and did not recognise that the process of facilitation includes everything the leader does before, during and after the experience to enhance the clients reflection, integration, and continuation of lasting change that occurs through the adventure experience (Priest et al., 2000). I had not realised that by frontloading and isomorphically framing each lesson, reflecting-in-action with participants as they attempted challenges, debriefing with individuals, small groups and whole class after and then creating an engaging learning journal for individual self-reflection, I had offered multiple opportunities for the facilitation of experiences.

5.3 - Recommendations

Now at the end of this research process I consider some of the aspects of AC facilitation that I have learned and I provide a summary of my learning for others to consider. From my reading of the literature and research of adventure based learning within the context of an elementary physical education teacher, and even more specifically, one who teaches in an international setting or uses the PYP curriculum, there are several things that I would offer my fellow practitioners to do when both setting up and teaching an adventure challenge program.

Recommendation	Description
Become familiar with theory and application of adventure education	Know why it is that ABL can be effective and how to get positive outcomes from process-based teaching.
Be aware of your role	Being aware that the role of the facilitator or teacher may shift depending on the needs of your participants.

Be present	Understand that facilitation can be an art of balancing saying just enough at just the right time to allow students to interpret their own experience. Do not get to caught up in the mechanics of the lesson and forget to observe those teachable moments.
Be inclusive	Know your students – their EAL status, cultural background, specific learning needs, socio-emotional issues -
Timing is everything	Be strict with your timings but err on the side of more debrief/reflection time than less.
Be prepared	Planning for learning to take place will allow you to free up attention and be more present. This includes scheduling, facilities, equipment, facilitative questions and contingency plans.

Table 10. List of Recommendations

5.3.1. Become familiar with theory and application of adventure education

Adventure education was once on the periphery of physical education yet it is now an important component of many programs, and a compulsory one of the Primary Years Program. It is therefore relevant to study the theory behind it before applying it in the classroom. In contrast, Ressler (2012); Timken and McNamee (2012) found that Physical education teacher training does not prepare teachers for the rigour of an adventure based learning program. Having a series of fun challenges and assuming that students will learn from their unmediated experiences is a misguided attempt at promoting experiential learning.

At the very least, practitioners should become versed with the founding philosophies such as Dewey's view of establishing an environment conducive to student's personal learning that builds on their present understanding. They should be familiar with a version of Kolb's (1984) Experiential Learning cycle and understand that it will be different for each of their students. The one that I found most useful was Greenaway's (2004) 'Plan –Act- Review' model, which was very simple but seemed the most practical for an elementary PE class.

This is one of the 5 basic principles of ABL but the rest are also of importance (Dyson & Sutherland, 2014). Teachers should understand how to sequence a program that builds developmentally and progressively (Bisson, 1997). Classes should have safe learning environments that are created by student-driven Full Value contracts. Teachers should be able to recognise differences between student's comfort-zone and their stretch-zone (Prouty et al, 2007), yet still respect their right of Challenge-by-Choice (Panicucci et al., 2002). This in itself is a challenge as it is often difficult to judge when a student is in your opinion 'giving up' and when they are genuinely moving out of their 'stretch zone' into panic. Indeed, Brown (2008) argues that using stress as the way to achieve growth is an outdated model and that perhaps the 'comfort zone' might be better used in metaphorical terms. Lastly, understanding the facilitative process and the role of the facilitator is crucial, so finding a debrief tool that matches your facilitative style and your students' needs is important.

5.3.2. Focus on teaching interpersonal skills rather than attitudes

The saying that goes "give a man a fish and he will eat for a day but give him a net and he will eat forever" is nearly right but should probably include "and guide him how to hold it" for it to work in practice. This corresponds, particularly with younger learners, student's need to understand not just that there are problems to be solved, but what are the best ways to go about trying to solve them. In a perfect world we could let students go through any number of experiential learning cycles and hope that they would eventually find a solution through trial-and-error. This has the potential to lead towards what Dewey (1938) would consider a 'mis-educative experience' (p. 5), where if left unguided students might draw a negative affect from the experience, which in a PE class might be also be safety concern- either physical or emotional. Because of time constraints, teachers also know that there is generally not time or resources to let this process amble to its own conclusion. However, armed with some inter-personal skills, such as communication, problem-solving, cooperation, decision-making and trust, students are better equipped to work together or independently to complete challenges and solve problems more effectively. Dewey (1938) argued that it was the teachers' responsibility to create the right learning environment for experiential learning to occur and teaching these skills helps this process. Just as teaching the skill of the eskimo roll is important for maximising a kayaking experience, so is learning a problem-solving cycle equally important for approaching a team-building challenge. The skills do not have to be taught in isolation through direct instruction but should be

incorporated into the context the lesson takes place in and could occur throughout the briefing, action and debriefing phases of this lesson.

Of these skills, the one that should be taught most explicitly, particularly if the challenges are going to be group-based, is that of effective communication as without it many of the other skills may be difficult to attain. Teach the fundamentals of active listening (Hoppe, 2006; Jalongo, 1995), using feedback or clarifying questions (Priest & Gass, 2005), using positive communication strategies (Midura & Glover, 2005) and peer observation (Topping, 2009) and the participants will have the tools to negotiate the challenges within their groups or expressing their thoughts individually. When children who struggle to communicate make an attempt it should be also recognised and encouraged.

There is much evidence to suggest that adventure education does result in an improvement in intrapersonal attitudes (Hattie et al., 1997; Neill, 2008) but teachers have limited control as to what each individual will take away from an experience. What they can do is help the learner recognise the meaning attached to their own actions and decisions and prompt them to reflect on how this might impact future situations.

5.3.3. Be prepared

Planning for success is a crucial part of teaching in general and adventure education in particular. It is important to plan for each lesson to scaffold on the one before, re-emphasising the skills learned and reflecting on the experiences that have already occurred (Bisson, 1997). Ensuring that space and resources are available and organised, that time is allocated to the experiential process and then adhered to and that provisions for student safety have been made will allow the teacher time to be present and pick up the teachable moments.

Planning for facilitating students' reflection on adventure experiences starts with a thorough understanding of their needs within the context of the program the teacher is working within (Gass & Stevens, 2007). For an elementary program these needs can be, for example, as broad as improving a large group inter-personal skill of cooperation or as narrow as an individual goal of improving self-efficacy. Once the learning objectives have been identified, it may be useful to consider any other facilitative forces that could be influencing how things turn out. Amongst these will be the personal attributes of participants, their individually different experiences, the group dynamics, the nature of

the activities, and the influence of the natural environment (Greenaway, 2004). Once the needs have been assessed and other factors have been considered then the teacher can choose activities and plan ideas for reflection.

During the briefing, planning to front-load students with concepts, skills, probing questions or isomorphic metaphors will help prepare students for the learning that is about to take place. Because during an activity students often get caught up in the heat of the moment as the excitement orients them towards task completion, it is a good idea to offer a revisiting question to remind them of the goals of the lesson.

When planning the facilitative process thinking of prospective open-ended questions and projecting what situations might occur will help to guide the process. Of course, the best-laid plans will never exactly fit reality but for an experiential learning process to occur there must be a meaningful reflection of what happened and good facilitative questions are valuable in teasing these understandings out.

There are many debriefing models that can be utilised but from this study I found the simple Gestalt therapy model of 'What?, So what? Now what?' (Gilsdorf, 1998) to be more useful than the more popular yet complex 6-stage 'Funnelling' model as proposed by Priest and Gass (2005). This seemed to fit more easily into the over-arching ELC and was easier to apply to the younger learners in my context. The "What Happened?" line of questioning initially distilled what had actually occurred from different perspectives. From that simple breakdown students were able to use the 'So what?' questions to judge their own feeling in comparison to the task and other people's feelings. Once they had gained this perspective they were able to visualise the "Now what?" questions, particularly with reference to how they might approach a similar situation in the future. These questions need to be expanded depending on the needs of the student or group but with a shorter window to debrief due to time constraints and an even shorter attention span, students need to get to the crux of the problem being discussed in the most efficient way. I borrowed ideas from Knapp (1990) who developed a series of pre-prepared questions associated with common adventure program topics that included communication, feelings, prejudice, listening, leadership, followership, decision-making, cooperation, diversity, trust and closure. These allow a facilitator to be prepared for when certain themes arise.

A more recent model, and one that I would try in future units is the Sunday Afternoon Drive model proposed by (Stuhr & Sutherland, 2013), as this is designed for an ABL environment and allows the facilitator more flexibility in where to guide the debriefing process. They found that a student-driven approach in the debrief personalises the conversation, making the experience more relevant and meaningful for students. It was designed for novice facilitators as a more easily-applied model though there has been no evidence to date that it remains simple in an elementary context.

5.3.4. Timing is everything

With such a finite window of a typical 40-60 minute elementary PE lesson getting the timing and flow is of critical importance. When in that awkward position of having to make the decision of "do I have enough time to squeeze in another challenge or not?", invariably teachers should choose to allocate more time to debriefing and reflection than extra activity for activities sake. It is tempting to move onto the next challenge but leaving an experience unprocessed or reviewed robs the previous challenge of the meaning it might have imparted. Of course, if a facilitator has been able to comprehensively frame the challenge in advance or reflect-in-action as the challenge has taken place then it becomes less important to halt what might provide rich and diverse experiences that might happen. Brown (2002) goes as far as to suggest that 'circle-time' is there for facilitators benefit rather than the students.

It important to be reflective as a practitioner and learn how long it takes your groups to attempt and debrief challenges and with that judgement, plan accordingly. It is easier to modify a challenge to make it easier or harder or add another reflective question to the debrief than it is to try and complete a subsequent task as from my own research, a challenge never went under-time. This has the added benefit of allowing sufficient time for individual reflection as a part of a debriefing. This is where many of the students do their own internal processing of what happened in the challenge.

The facilitator also has to be prudent with the time that they are speaking. In my case the briefing and front-loading often lasted longer than it needed to thus impacting the rest of the lesson. It is therefore important to adhere to the allotted time unless a truly 'teachable moment' arises. During debriefing, the facilitator should not be using questioning as an opportunity to story-tell or give their opinion. It is an opportunity to help students polish their own thoughts.

5.3.5. Be inclusive

The balance of giving too much time for talking during debriefing is that those students who struggle to articulate their thoughts to others often are marginalised. There is often a large range of individual needs in an average PE class and strategies need to be considered to ensure they can learn from their own experiences as readily as other members of their group. A common challenge I faced in my lessons was the spread of English as an Additional Language learners and different cultural values that they also bought with them to adventure education. Other students are naturally introverted and struggle to participate in what are typically extrovert-centric activities (Cain, 2012).

To cater to these individual needs Gomez and Jimenez-Silva (2012) believe a PE teacher needs to know the individual. By understanding their students, teachers have more of an appreciation as to how best to provide equal and inclusive opportunities for them to engage in the entire process. This does not just apply to adventure challenge, but all areas of physical education curricula. It requires further planning and preparation but is a natural part of the needs assessment of the program.

A major finding that I discovered was that providing different methods of reflection and debriefing gives these learners an alternative medium of expressing themselves that they normally cannot take advantage of in group settings. As well as allowing them the time to process it also makes the reflection more and engaging and creative, again appealing to the different learning styles in the rest of the class. This table sums up some of the potential needs of students, at least in my international setting, and the differentiation strategies that might be employed to cater to them.

Individual need	Know your students	Strategy	Authors
English as Additional Language	- background, culture, language proficiency, home language, previous schooling, same language speakers in class/school.	- create safe environment - pair with buddy (with like language speaker if possible) -use visual cues – whiteboard with instructions, goals, brainstorms, labels. - range of reflective tools – journal (digital with translate function works well), drawing, modelling, video, role-play. - allow reflection in home language and work on translation at later date.	(Gomez & Jimenez-Silva, 2012), (Bell & Lorenzi, 2004), (Marshall, 2012)
Cultural	- background, home language, existing intercultural tensions	-Examine content of lessons for cultural assumptions that might impede the student's learning. - Try to get a mix of cultures when grouping to avoid cliques.	(Tripp et al., 2007) (Schultz, 2000)
Introversion Extroversion	Learning style, level of comfort with group size (individual, pair, small/large group), willingness to engage	-Use a learning style inventory/survey and have students share the results so students can see how others think/ learn/contribute. - Appeal to natural sensitivity by offering a 'Carer' role in a team. Challenge extroverts to try the same role. - Refer to Stretch and Comfort Zones. - range of reflective tools with sufficient time to complete them.	(Cain, 2012)
Social-Emotional issues	Speak to classroom teacher, guidance counselor about any red flags	-Speak to individuals to touch base and let them know that you empathise - establish personal goals - group with more sensitive groups - have common recognition of trigger points	

Physical / cognitive difficulties	Speak to classroom teacher, learning support about proven strategies. Use established IEP.		

Table 11. Potential learning needs in international PE setting.

5.3.5. Be aware of your role

Once you have gauged the needs your students and their groups, you should then be more aware of what role you might need to take when facilitating. For example, adopting a facilitative leader role at the beginning of a unit by ensuring all students understand the learning objectives and success criteria, may then need to be switched to a facilitator role when a group encounters a tension outside those delineations. This could then change to being more of an involved facilitative trainer when specific skills are required to be successful on a particular challenge, such as how to catch participant during a trust fall (Thomas, 2010). It could require a facilitator to be present in one group's circle conversation or silent on the outer of another. To do this transparently, students need to know that this is what you are going to do, otherwise they will struggle to see you outside your normal teacher role and you will find questions being directed to you rather than each other.

5.3.6. Be present

One of the advantages of teaching ABL in PE is that teachers are more likely to know their students prior to the experiences than those adventure instructors who see might meet their participants on a course or expedition for the first time. This means that potential interventions or questions can be planned ahead of time, which allows the teacher to be more 'present' during the experiences. Trying to stay with groups for longer periods increases the exposure time to 'teachable moments'. This also allows the establishment of personal relationships and strong connections with their students (Sibthorp, Gookin, & Paisley, 2007). However, try to ensure that you do circulate between groups because as a teacher, you need to track each student's progress.

Being attentive and do not dominate the student's stories with versions of your own, as you will potentially be extinguishing opportunities for them to construct their own meaning of an experience (Ringer, 1999). I found this particularly difficult when students were trying to negotiate through moments of tension that I had encountered before with other groups.

5.4. Conclusions

The purpose of this study was to establish how I might best facilitate an elementary adventure challenge unit to improve the development of interpersonal attitudes and interpersonal skills in my students. After the first round of action research, the findings indicated that intrapersonal attitudes were dispositions that were difficult to measure and plan for in elementary ABL and there was little evidence of any improvements in this area. Interpersonal skills, however, I found to be easier to plan and provide experiences for and showed some improvement. Of these, the results conclusively indicated that students and teachers found communication as the most important skill that needed to be learned and used. In acknowledgement of this observation, the second cycle of action research focused on this finding with improvements in this skill as well as others. These students then reflected that the skills they learned would be of use to them outside of PE class, which is the motivation behind the adventure-based learning curriculum model. Another impact of the focus on communication was that some students, particularly the EAL learners, felt marginalised, as their participation was therefore limited.

I also discovered that there was a tension between wanting to adhere to lesson objective timings and providing enough processing time to be facilitated. Various internal and external factors would impinge on potential reflection time and rob the students of the capstone of the experiential learning process. My role as a facilitator came with many responsibilities, some of which I was not prepared for. While running the practicalities of the lessons, I was initially drawn into managing the class rather than facilitating learning experiences. As the lessons progressed I found that cultivating both my intuition and my intentionality were important steps in my development as a facilitator. Becoming more relaxed about achieving objectives and developing relationships with individuals and groups assisted with this. Sometimes my role shifted to other areas such as councillor or a PE coach depending on the context, but I found as long as the students and I were aware of this happening, the trust in the facilitative relationship was still maintained.

As well as knowing myself and my role, I found it was also important to know my students and where they were coming from. In the international PE context there is such a wide range of students who have different language abilities, cultural differences, learning needs and styles and physical and emotional challenges. While ABL has the potential to be the perfect medium for learning in this eclectic diaspora, it requires planning and understanding of these students needs to provide the right environment for students to grow, intra and interpersonally.

This study has impacted my pedagogical standpoint as a physical education teacher and has enhanced my practice. The impacts of the action research and the reflective learning that goes along with this process has imparted an indelible appreciation for how continual small improvements make big differences and that as teachers we, along with our students, should never stop learning. I am more convinced than ever that ABL as a curriculum model has many positive effects and I now understand with adequate preparation, an intuitive and intentional approach to facilitation and a focus on tangible skills, it is a rare opportunity to potentially engage with all students in a PE learning environment.

5.5. Further areas for study

There is still a dearth of research in the area of elementary adventure-based learning, considering the number of schools who are required to run it in their programs. This research should follow the trend of moving away from an outcomes-focus to a more process-based understanding. Teaching and learning PE in international schools is also an area that is under-researched, whether in ABL or beyond, and its unique context calls for study.

Using an action-research based methodology is an effective medium for teacher-practitioners to take these challenges on. There is an internal drive for results to improve practice that is often not present in other methodologies. Though this comes with risks to trustworthiness, with enough academic rigour through poly-angulation of data sources and effective data analysis methods, it provides a depth of evidence to warrant further investigation.

Through this research I have shed light on some interesting and challenging considerations within the field of ABL. I am convinced that that this curriculum model holds considerable promise for positively affecting elementary school student's interpersonal skills and hopefully, by extension, their

intrapersonal attitudes. I hope that through my research that other teachers will be better prepared for the challenges of effectively facilitating the processing of their own students experiences.

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Appendices

1. Ethical Clearance Letter

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

HUMAN ETHICS COMMITTEE

Secretary, Lynda Griffioen
Email: human-ethics@canterbury.ac.nz

Ref: 2014/02/ERHEC

5 March 2014

Cameron McHale
College of Education
UNIVERSITY OF CANTERBURY

Dear Cameron

Thank you for providing the revised documents in support of your application to the Educational Research Human Ethics Committee. I am very pleased to inform you that your research proposal "Facilitating the challenge back into adventure challenge - improving inter/intrapersonal skills and attitudes through adventure based learning" has been granted ethical approval.

Please note that this approval is subject to the incorporation of the amendments you have provided in your email of 27 February 2014.

Should circumstances relevant to this current application change you are required to reapply for ethical approval.

If you have any questions regarding this approval, please let me know.

We wish you well for your research.

Yours sincerely

Nicola Surtees
Chair
Educational Research Human Ethics Committee